

# The Nutrition Reporter™

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## Researchers Find that Extracts of Kudzu, an Herb, May Help Curb Excessive Drinking

Kudzu, sometimes considered a runaway weed, may help control binge drinking and alcoholism. Alcohol-related problems contribute to an estimated 100,000 deaths each year in the United States.

The herb has a long history of use in Chinese medicine, dating back to 600 A.D., for the treatment of intoxication and alcohol-related problems. Some animal and initial human studies have suggested that it might be useful in treating heavy drinkers.

Scott E. Lukas, PhD, of the Harvard Medical School, and his colleagues used extracts of kudzu (*Pueraria lobata*) to treat 11 men and three women volunteers who drank about 25 beers weekly. The subjects ranged from age 21 to 32 and had started drinking alcohol at about age 13.

The subjects were asked to take two 500 mg capsules of kudzu extract three times daily for one week. During a separate week, they were given placebos.

After taking either the kudzu or the placebos, the subjects were brought into a comfortable but monitored setting and allowed to drink as many beers as they wished.

"It is interesting that, in this naturalistic setting, participants consumed nearly 1.5 fewer beers (in only 90 minutes) after kudzu treatment than after placebo treatment and that this effect occurred after a relatively brief treatment period (1 week)," wrote Lukas.

The subjects took more time to consume the beers and took more sips, but consumed less beer with each sip.

He also noted that the subjects may have consumed less alcohol "because the first one to two beers had satiated their desire for alcohol."

While taking the placebos, the subjects consumed the same amount of beer as they had without any treatment intervention.

Lukas noted that "this small, but significant, decrease in consumption could have important implications. This is especially true because there was a complete lack of any side effects, and no participant

could identify that they had taken any medication... We are presently studying individuals after 4 weeks of treatment with this kudzu extract and have no observed any side effects or changes in blood or urine chemistry profiles. The complete lack of side effects of the dose used in this study suggests that higher doses may exhibit greater efficacy and may also be well tolerated."

Ironically, kudzu is considered a fast-growing agricultural pest in the southern United States.

Reference: Lukas SE, Penetar D, Berko J, et al. An extract of the Chinese herbal root kudzu reduces alcohol drinking by heavy drinkers in a naturalistic setting. *Alcoholism: Clinical and Experimental Research*, 2005;29:756-762. □

### Perspectives...

#### The Value of Testing for Nutrients

Conventional physicians often criticize or dismiss nutritional treatments. Their views are often shaped by contradictory studies and by what seems too simple of a solution for complex diseases.

Unfortunately, it's all too easy to overlook the fact that nutrients serve as the biochemical building blocks of our bodies. Ignoring the necessity of these building blocks suggests that our bodies form from something else, such spontaneous generation.

Biochemical reactions require reliable levels of nutritional "substrates," and low nutrient levels slow the rate of necessary biochemical reactions. Optimal levels of nutrients promote these biochemical reactions – and health.

From a clinical standpoint, it only makes sense to rule out the most likely causes of a health problem before investigating more esoteric causes and ordering expensive high-tech tests. Nutritional deficiencies and imbalances certainly qualify as a likely cause of health problems. With two-thirds of Americans being overweight, it's clear that nutritional problems abound.

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As elemental as all this sounds, relatively few physicians bother to measure their patients' nutrient levels. Often, they simply make assumptions about nutritional adequacy instead of following an evidence-based approach – such as blood testing – to determine a patient's nutritional status.

Eight years ago, I began undergoing periodic nutritional workups. During my first round of testing, I saw that my dietary intake of nutrients was good, but that blood levels of many nutrients were poor. Because testing helped me identify problematic nutrients, I have since been able to correct these nutritional problems.

Without testing, these low nutrient levels would have set the stage for serious diseases. For more information, visit [www.brightspot.org](http://www.brightspot.org). —JC

### **Vitamin E Supplements Benefit Heart, Despite Some Recent Reports**

As if recent studies on vitamin E have not been confusing enough, the latest study found benefits that were actually downplayed by the researchers and ignored in most news reports.

Julie E. Buring, ScD, of Harvard Medical School and lead investigator in the Women's Health Study, tracked the health of almost 40,000 women who took either 600 IU of natural vitamin E or placebos for 10 years. She and her colleagues reported that vitamin E did not reduce the incidence of heart attacks, strokes, or cancer.

They concluded that the "data do not support recommending vitamin E supplementation for cardiovascular disease or cancer prevention among healthy women."

Despite the negative conclusion, Buring and her colleagues noted that women taking vitamin E did have a 24 percent lower risk of death from cardiovascular disease. Women age 69 and older had even greater benefits – a 49 percent reduction in cardiovascular death and a 34 percent lower reduction of heart attack.

The researchers acknowledged that, contrary to some recent reports, they saw no side effects from taking vitamin E supplements.

Reference: Lee IM, Cook NR, Gaziano JM, et al. Vitamin E in the primary prevention of cardiovascular disease and cancer. The women's health study: a randomized controlled trial. *JAMA*, 2005;294:56-65. □

### **Vitamin E and Coenzyme Q10 Improve Patients with Friedreich Ataxia**

Supplements of vitamin E and coenzyme Q10 can lead to improvements in people with Friedreich ataxia, an inherited neurological disease. The disorder is characterized by progressive loss of muscle

control that affects the limbs and gait.

Paul E. Hart, MRCP, of the Royal Free and University College Medical School, London, and his colleagues followed up on earlier research suggesting that Friedreich ataxia involves defects in how the body makes energy from food. The defects lead to an accumulation of iron, which increases free radical damage and causes further problems with energy production.

CoQ10 plays a key role in energy production, and vitamin E is a well-known antioxidant that protects cell membranes from free radical injury.

Hart and his colleagues treated 77 patients with Friedreich ataxia for almost four years, giving them 400 mg of CoQ10 and 2,100 IU of natural vitamin E daily.

Patients benefited from increases in bioenergetic activity – energy – in heart and skeletal muscle cells throughout the study. Heart function among the patients improved significantly, and overall measures of ataxia remained stable. However, posture and gait continued to deteriorate.

Reference: Hart PE, Lodi R, Rajagopalan B, et al. Antioxidant treatment of patients with Friedreich ataxia. *Archives of Neurology*, 2005;62:621-626. □

### **Vitamin D and Calcium May Help Prevent Symptoms of PMS**

High intake of vitamin D and calcium may reduce a woman's chances of developing premenstrual syndrome (PMS). Mild PMS affects up to 90 percent of premenopausal women, and somewhere between 8 to 20 percent of women experience severe symptoms.

Elizabeth R. Bertone-Johnson, ScD, of the University of Massachusetts, Amherst, and her colleagues tracked the diets and PMS symptoms of 3,000 women over 10 years. They found that those with the highest intake of vitamin D – an average of about 700 IU daily – were 41 percent less likely to develop PMS symptoms. Similarly, women with the highest calcium intake – a little over 1,200 mg daily – had a 30 percent lower risk of PMS.

Bertone-Johnson and her colleagues wrote that both nutrients might help prevent PMS by how they interact with estrogens. They noted that some PMS symptoms, such as depression, anxiety, and fatigue, resemble those of calcium deficiency. Also, women with a history of PMS have a higher than average risk of developing osteoporosis later in life, a disease that can be prevented with calcium and vitamin D.

"A high intake of calcium and vitamin D may reduce the risk of PMS...Given that calcium and vitamin D may also reduce the risk of osteoporosis and some cancers, clinicians may consider recom-

mending these nutrients even for younger women," Bertone-Johnson and her colleagues concluded.

Reference: Bertone-Johnson ER, Hankinson SE, Bendich A, et al. Calcium and vitamin D intake and risk of incidence premenstrual syndrome. *Archives of Internal Medicine*, 2005;165:1246-1252. □

## Chromium Picolinate Supplements May Help People with Arrhythmias

Supplements of chromium picolinate are well established for their ability to improve insulin function – also known as insulin sensitivity – and reversing some symptoms of diabetes. In a recent study, researchers found that chromium picolinate also reduces the risk of dangerous heart-rhythm abnormalities called arrhythmias.

Bojan Vrtovec, MD, PhD, a cardiologist at Ljubljana University Medical Center, Slovenia, monitored the "QT interval" of 60 patients with type 2 diabetes. A prolonged QT interval increases the risk of developing arrhythmias.

In the study, half the patients were given 1,000 mcg of chromium picolinate daily for three months, followed by daily placebos for another three months. Meanwhile, the other patients received daily placebos for three months, followed by daily chromium picolinate for another three months.

Chromium supplementation led to significant reductions in the patients' QT intervals. The subjects also benefited from significant decreases in their insulin levels – reductions of 23 percent in one group and 33 percent in the other – while taking chromium supplements.

According to Vrtovec, prolonged QT intervals had been previously linked to high fasting glucose and insulin levels, suggesting that the heart-rhythm abnormality may be related to insulin resistance.

Reference: Vrtovec M, Vrtovec B, Briski A, et al. Chromium supplementation shortens QTc interval duration in patients with type 2 diabetes mellitus. *American Heart Journal*, 2005;149:632-6. □

## Guess What? Heartburn May Have Something to Do with Foods You Eat

There's an old joke: One person says, "It hurts every time I do that," as he self-inflicts some pain. "So," the second person responds, "stop doing that!"

That's essentially the situation with heartburn. When people eat too much food, or foods that keep upsetting their digestive tract, they often develop heartburn.

So, why not just stop eating the heartburn-causing foods? Good question.

For relief, millions of people turn to an assortment of over-the-counter and prescription treatments.

But the underlying problem is not a deficiency of antacids, but repeatedly eating foods that cause digestive problems.

Ronnie Fass, MD, of the University of Arizona College of Medicine, Tucson, recently pointed the finger at several apparent causes of heartburn, including carbonated soft drinks.

He recently studied more than 15,000 people, 3,806 of whom regularly experienced heartburn while sleeping. Because the body is reclining, heartburn during sleep tends to last longer, causes more damage to the esophagus, and poses a greater long-term risk of esophageal cancer.

Fass found that being overweight, drinking carbonated soft drinks, snoring, and daytime sleepiness were the most common predictors of nocturnal heartburn. It may contribute to daytime sleepiness because it disrupts nighttime sleep.

Similar symptoms may result from excessive consumption of sugars and refined carbohydrates, as well as prediabetes.

Both heartburn and the more serious gastro-esophageal reflux disorder have reached epidemic levels. In the United States, 44 percent of adults have heartburn at least once a month, 14 percent have it weekly, and 7 percent have it daily, according to Fass.

Reference: Fass R, Quan SF, O'Connor GT, et al. Predictors of heartburn during sleep in a large prospective cohort study. *Chest*, 2005;127:1658-1666. □

## Omega-3 Fish Oils Reduce Risks Following Heart Bypass Surgery

Taking supplements of omega-3 fish oils can reduce the risk of atrial fibrillation in patients undergoing coronary artery bypass surgery. Atrial fibrillations are erratic heartbeats that can complicate recovery and cause death.

Leonardo Calo, MD, of the San Filippo Neri Hospital, Rome, Italy, and his colleagues tracked the health of 160 patients undergoing bypass surgery. Seventy-nine of the patients received 2 grams of omega-3 fish oils daily, starting at least five days before surgery and continuing until they were discharged from the hospital. The other patients did not receive supplements and were used as a comparative control group.

The omega-3 supplements provided 850 to 882 mg daily of eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA).

About half as many of the patients who received the supplements developed atrial fibrillation, compared with those receiving conventional treatment. Only 12 (15 percent) of the patients receiving omega-3s developing the heart problem, compared with 27

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## Quick Reviews of Recent Research

### • Supplements improve walking distance

Researchers treated 60 men with peripheral vascular disease, also known as intermittent claudication, with either a fortified beverage or placebos for 12 months. The fortified drink contained added eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA), oleic acid, folic acid, and vitamins A, B6, D, and E. Examinations during the study found that the supplements increased the distance patients could walk before experiencing pain in their legs.

Carrero JJ, et al. *Journal of Nutrition*, 2005;135:1393-1399.

### • Magnesium may reduce cyclosporine toxicity

Cyclosporine, a drug given to transplant patients to prevent organ rejection, reduces resistance to infection and can be toxic to the kidneys. Researchers gave cyclosporine to laboratory rats, and some of the rats were also given supplemental magnesium. After 28 days, rats receiving cyclosporine developed signs of kidney damage. This damage was significantly reduced among the animals that also received magnesium.

Yuan J, et al. *Transplantation Proceedings*, 2005 37:1892-1895.

### • Study confirms benefits of Lorenzo's oil

The 1993 film "Lorenzo's Oil" portrayed the struggle of two parents searching for a treatment for their son, who had been diagnosed with a fatal nerve disease known as adrenoleukodystrophy. In a study detailing the use of the oil in 89 boys with the disease, doctors reported that three-fourths remained symp-

## Omega-3 Fish Oils, Heart...

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(33 percent) of those in the control group.

Calo calculated that the omega-3 supplements reduced the incident of post-surgical atrial fibrillation by 54 percent.

In addition, patients receiving the omega-3s were able to leave the hospital about a day earlier, compared with those in the control group.

Previous research had suggested that omega-3 fish oils can reduce the risk of arrhythmia, but this appears to be the first study showing that benefit in patients after coronary artery bypass surgery.

Calo wrote that the omega-3s probably lead to an "increased electrical stability" that protects the heart against fibrillation.

Reference: Calo L, Bianconi L, Colivicchi F, et al. N-3 fatty acids for the prevention of atrial fibrillation after coronary artery bypass surgery. *Journal of the American College of Cardiology*, 2005;45:1723-1728. □

tom free during seven years of follow up. The treatment protocol also includes essential fatty acids, particularly docosahexaenoic acid (DHA).

Moser HW, et al. *Archives of Neurology*, 2005; 62:1073-1080.

### • Vitamin C good for maintaining youthful arteries

Elasticity of the major cardiothoracic arteries decreases with age. Researchers compared the elasticity – i.e., flexibility – of these arteries in 10 young women and 21 estrogen-deficient postmenopausal women. Elasticity was 56 percent lower in the older women, but intravenous vitamin improved it by 26 percent.

Moreau KL, et al. *Hypertension*, 2005;45:1107-1112.

### • St. John's wort may break down meds faster

The liver's detoxification enzymes help the body dispose of hazardous substances, but the same enzymes often hasten the breakdown of medications. In a recent study, researchers asked 16 healthy young women to take a low-dose oral contraceptive for four menstrual cycles. After two cycles, the women were then asked to also take 300 mg of St. John's wort extract three times daily. Use of the herb reduced the activity of the contraceptive by 13-15 percent, resulting in breakthrough bleeding, follicle growth, and likely ovulation.

Murphy PA, et al. *Contraception*, 2005;71:402-408.

### • NAC reduces inflammation and lung problems

Although sold over-the-counter as an antioxidant, N-acetylcysteine (NAC) is also regarded as a drug useful in improving cough and clearing the lungs. In a study of 123 patients with chronic obstructive lung disease, both 600 mg and 1,200 mg of NAC daily led to substantial reductions in signs of inflammation. NAC also improved lung function. Overall, the higher dose was more effective.

Zuin R, et al. *Clinical Drug Investigation*, 2005;25:401-408.

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