SOCIETY FOR NEW AGE HERBALS

NEWS, VIEWS & REVIEWS

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Oats and heart health

Oats are important cereal used all over the world. In addition to its nutritive value it also has some therapeutic properties. In homoeopathy it is an important brain tonic. Now research shows that some phenolic compounds such as avenanthramide (AVE), found only in oats, may possess antioxidant, anti-inflammatory, anti-itch and anti-cancer properties.Oat AVEs may be partly responsible for the positive association between oats and heart health. Oliver Chen, PhD, of the Jean Mayer USDA Human Nutrition Research Center on Aging at Tufts University, has demonstrated the antioxidant and anti-inflammatory properties of AVEs likely contribute to the atheroprotection of oats. Similarly, Mohsen Meydani, PhD, from the Vascular Biology Laboratory at the Jean Mayer USDA Human Nutrition Research Center on Aging at Tufts University, provided evidence that oat AVEs suppress the production of inflammatory cytokines associated with fatty streak formation in the arteries. In addition, oat AVEs appear to repress the process associated with the development of atherosclerosis.

(Source: Physicochemical Properties and Biological Functionality of Oats, at the 247th Annual Conference of the American Chemical Society in Dallas, TX.)

Cinnamon and serum lipids and glucose

Diabetes has been identified as a serious disease in modern society. In addition to synthetic drugs a number of plants are being evaluated for their ability in the management of diabetes. Use of Cinnamon (Cinnamomum spp., Lauraceae) has been associated with lowering of serum lipids and blood glucose, promoting insulin release, enhancing insulin sensitivity, increasing insulin disposal, and regulating of protein-tyrosine phosphatase 1β and insulin receptor kinase. In studies with diabetic rats, cinnamon extracts were shown to increase the expression of peroxisome proliferator-activated receptors (PPARs). PPARs are targeted in therapies for diabetes and hyperlipidemia and have been shown to increase insulin sensitivity and high-density lipoprotein cholesterol (HDL-C) levels in addition to decreasing triglyceride levels.

Evidence from previous human clinical trials has shown conflicting effects of cinnamon on blood glucose and lipids.The meta-analysis of the data including that from five new randomized, controlled studies has been carried out to throw some light on the significance of the use of cinnamon in diabetes.

The databases MEDLINE®, Embase™, and Cochrane Central Register of Controlled Trials (CENTRAL) were searched through February 2012 using the keywords cinnamon and diabetes. Studies were considered for inclusion in the analysis if they were randomized, controlled trials that investigated type 2 diabetes using cinnamon supplements in any dose or form. The studies had to have one of the following dependent variables measured to be considered for analysis: glycosylated hemoglobin (hemoglobin A1c), fasting plasma glucose, total cholesterol (TC), low-density lipoprotein cholesterol (LDL-C), HDL-C, or triglycerides (TGs). All of the potentially relevant articles were reviewed by two of the investigators. Author identification, year of publication, study design, source of study funding, study duration and follow-up, study population, sample size, time since diagnosis, cinnamon dose, product name and brand, formulation used, and cinnamon species were recorded. Baseline data for hemoglobin A1c level, fasting plasma glucose level, body weight, body mass index, TC, LDL-C, HDL-C, and TGs were recorded. The studies were checked for bias with the Cochrane Risk of Bias Tool. The mean change from baseline for levels of hemoglobin A1c, fasting plasma glucose, TC, LDL-C, HDL-C, and TGs were analyzed with Comprehensive Meta-Analysis software, version 2 (Biostat). Both heterogeneity among studies and publication bias were calculated. The effects of cinnamon dosage and form were calculated with subgroup analysis.

Ten studies met the criteria imposed by the authors (n=543 subjects). Of these, eight trials had measures of hemoglobin A1C, LDL-C, and HDL-C, and eight trials had measures of fasting plasma glucose, TC, and TGs. Eight of the studies used formulations of C. aromaticum (syn. C. cassia) and two did not state the species of cinnamon. The dosage of cinnamon ranged from 120 mg per day to six grams per day. There was variation among the studies as to when the cinnamon supplements were administered relative to meals. In seven studies,

participants took the cinnamon supplements with a meal. In the remaining studies, participants took supplements either before (one study) or after a meal (two studies).

Cinnamon supplements significantly reduced fasting plasma glucose by a weighted average of 24.59 mg/dL. This is a slightly greater reduction than that seen with the antihyperglycemic drug sitagliptin (-16 to -21 mg/dL), but considerably lower than that found with metformin monotherapy (-58 mg/dL). LDL-C and TGs also were reduced in patients who took cinnamon supplements when compared to control patients (-9.4 mg/dL and -29.6 mg/dL, respectively). Again, these reductions are considerably less than in patients on conventional medications; pravastatin and gemfibrozil have been shown to decrease both LDL-C and TGs by -50 mg/dL. HDL-C was significantly increased (1.66 mg/dL) in patients who took cinnamon supplements. There was no effect of cinnamon on hemoglobin A1c levels; however, when only capsule formulations of cinnamon were considered, hemoglobin A1c was significantly decreased (-0.27%).

There was a high level of heterogeneity among the studies for hemoglobin A1c, fasting plasma glucose, TC, LDL-C, and TGs. This may be the result of variation among the studies in the patients' age and health and in the dosage and form of cinnamon supplements used. There was also potential publication bias for fasting plasma glucose. No difference was seen in glycemic or lipid measures with cinnamon dosage.

These trends are similar to the authors' findings from their 2008 meta-analysis, but the five additional randomized, controlled trials have allowed the authors to conclude that cinnamon does, indeed, have a positive, significant effect on some measures of glycemic and lipid metabolism in patients with type 2 diabetes. This publication is consistent with another previous meta-analysis by other researchers of eight randomized, controlled trials on cinnamon preparations, which showed that cinnamon supplementation resulted in a statistically significant reduction of fasting blood glucose in people with type 2 diabetes and prediabetes.[2]
—Cheryl McCutchan, PhD (*HerbalGram*, issue 101, 2013; American Botanical Council)

References:
1. Baker WL, Gutierrez-Williams G, White CM, Kluger J, Coleman CI. Effect of cinnamon on glucose control and lipid parameters. Diabetes Care. 2008;31(1):41-43. 2. Davis PA, Yokoyama W. Cinnamon intake lowers fasting blood glucose: meta-analysis. J Med Food. April 2011; [epub ahead of print]. doi:10.1089/jmf.2010.0180.

Blood pressure lowering effect of Celery

Celery seed extract contains an important compound known as 3-n-butylphthalide, or 3nB for short, that is also responsible for the characteristic flavor and odor of celery. 3nB was discovered as the active component of celery in response to investigations by researchers seeking to explain some of the medicinal effects of celery, including the lowering of blood pressure and the relief of arthritis. 3nB first drew significant scientific attention when researchers at the University of Chicago Medical Center identified it as the factor in celery responsible for the blood pressure lowering effect of celery.

The research was prompted by one of the researcher's father, who after eating a quarter-pound of celery every day for one week observed his blood pressure dropped from 158 over 96 to a normal reading of 118 over 82. Subsequent animal studies found that a very small amount of 3nB lowered blood pressure by 12 to 14 percent and also lowered cholesterol by about 7 percent.

A recent human study evaluated the efficacy of a standardized extract of celery seed supplying 85 percent 3nB in 30 patients with mild to moderate hypertension. The dosage was 150 mg per day. The results showed a statistically significant decrease in both systolic (SBP) and diastolic blood pressure (DBP) compared to baseline measurements. The change at week six for the SBP was 8.2 mmHg and for the DBP was 8.5 mmHG. No side effects were reported.

NewData:

This study investigated the effects of different celery seed extracts on blood pressure (BP) in normotensive and hypertensive rats. The results showed that the amount of 3nB was the critical factor in determining the BP lowering effect of celery seed extract. While celery seed extract had a significant effect in lowering BP in hypertensive rats it had no effect on BP in rats with normal BP. The authors concluded "celery seed extracts have antihypertensive properties, which appears to be attributable to the actions of its active hydrophobic

constitutes such as 3nB and can be considered as an antihypertensive agent in chronic treatment of elevated BP."

Synthetic 3nB is being developed as a drug in China. Some of the effects noted in the preliminary studies with the synthetic version is an ability to prevent stroke; improve blood flow to the brain; protect the brain and enhance energy production within the brain; and improve mild impairment of cognitive function. In animal models 3nB has also been shown to increase longevity and prevent the development of Alzheimer's disease.
Courtesy: *doctormurray.com*

Aspirin

Aspirin and other non-steroidal anti-inflammatory drugs (NSAIDs) are associated with a significant risk of peptic ulcer as well as cerebral hemorrhage (resulting in a stroke). Even a dosage of 75 mg/day (the size of a baby aspirin) is associated with a 2.3-fold increased risk of ulcers compared with 3.9 fold increased risk at 300 mg/day and 3.2-fold risk at 150 mg/day. There is no difference in gastrointestinal bleeding rates in those given enteric-coated or non-enteric-coated aspirin.There is no clinical evidence of benefit of aspirin at dosages of 50 to 150 mg per day for any clinical indication in adults despite its popular prescription **New Data:** Two detailed reviews were conducted and published in the November 21, 2013 issue of the European Heart Journal. Courtesy:*doctormurray.com*

Chinese Kudzu for alcoholism

Kudzu is traditionally used in East Asia to treat drunkenness and intoxication. Now the tests at Harvard Medical School concluded that the compounds in Kudzu offer promise as effective agents for alcohol abuse

Used as tea**(one ounce per serving)** on a regular basis for three to five weeks. Roots and flowers (Puerariae Flos, Kudzu Flowers, Ge Gen Hua in Chinese) can both be used or combined. Flowers are steeped or quickly boiled. Roots should be boiled for 30 - 40 minutes. Powdered concentrate can be stirred into liquid. Kudzu decoction if taken before drinking creates mild discomfort when alcohol is taken.

Kudzu, 10 mg tablet, 3 times daily, helps deter alcohol consumption by producing nausea, swelling and facial redness when taken before drinking.(*Prescription for Herbal Healing*, Phyllis A. Balch

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