

LE Magazine August 2005

IN THE NEWS

Omega-3 Fatty Acids Cut Cardiac Risk



Omega-3 essential fatty acids reduce the risk of cardiac death more dramatically than does a class of cholesterol-lowering drugs called statins, according to a recent review published in the *Archives of Internal Medicine*.¹

Swiss investigators reviewed the results of 97 randomized, controlled trials—involving more than 275,000 subjects—that compared a lipid-lowering intervention with placebo or usual diet with respect to mortality. The Swiss team concluded that statins decreased cardiac mortality risk by 22%, while omega-3 fatty acids decreased risk by 32%. Statin drugs reduced overall mortality by 13%, but omega-3 fatty acids did better by reducing overall mortality by 23%.¹

Omega-3 fatty acids may have broad-spectrum cardiovascular benefits. Studies suggest that omega-3 fatty acids may help reduce inflammation and prevent arrhythmia and thrombosis,² in addition to lowering total cholesterol, LDL (low-density lipoprotein), and triglyceride levels.³

Fish and fish oils are rich sources of the omega-3 fatty acids EPA (eicosapentaenoic acid) and DHA (docosahexaenoic acid). Current dietary intake of EPA and DHA in North America is well below the level recommended by the American Heart Association for the management of coronary heart disease.²

—Elizabeth Wagner, ND

References

1. Studer M, Briel M, Leimenstoll B, Glass TR, Bucher HC. Effect of different antilipidemic agents and diet on mortality: a systematic review. *Arch Int Med*. 2005 Apr 11;165(7):725-30.
2. Holub DJ, Holub BJ. Omega-3 fatty acids from fish oils and cardiovascular disease. *Mol Cell Biochem*. 2004 Aug;263(1-2):217-25.
3. Lewis A, Lookinland S, Beckstrand RL, Tiedeman ME. Treatment of hypertriglyceridemia with omega-3 fatty acids: a systematic review. *J Am Acad Nurse Pract*. 2004 Sep;16(9):384-95.

CLA Promotes Sustained Fat Loss

Supplementing with conjugated linoleic acid (CLA) is safe, well tolerated, and leads to long-term reduction of body fat mass in overweight adults, Norwegian researchers reported recently.* Excess body fat and its associated health risks, including heart disease and diabetes, have reached epidemic status.

In this 24-month study, each of the 134 subjects received either a daily supplement of 3.4 grams of CLA or placebo. The subjects followed their normal diet and exercise routines. Measures of body composition and a range of blood markers were monitored. By the study's end, subjects who received CLA lost 6-8% of their body fat mass (4-6 pounds), compared to no change in the placebo group. No significant changes in cholesterol profiles or measures of glucose metabolism occurred in either group. Serum leptin levels, however, dropped by as much as 35% in the CLA group, leading to decreased appetite.



This study established three important properties of CLA. First, CLA exerted most of its effect within the first six months of use, but those effects persisted for at least 24 months, the period during which most adults who have lost weight regain it. Second,

while lean body mass often decreases with weight loss, individuals who supplemented with CLA increased their lean body mass while decreasing their fat mass. Finally, CLA was more effective in reducing body fat mass in those with higher body mass indices.

—Linda M. Smith, RN

Reference

* Gaullier JM, Halse J, Hoye K, et al. Supplementation with conjugated linoleic acid for 24 months is well tolerated by and reduces body fat mass in healthy, overweight humans. *J Nutr.* 2005 Apr;135(4):778-84.

Acetaminophen Use Raises Lung Disease Risk

Frequent use of the painkiller acetaminophen is associated with an increased risk of asthma, chronic obstructive pulmonary disease (COPD), and decreased lung function, according to a recent study published in the *American Journal of Respiratory and Critical Care Medicine*.¹

Acetaminophen is an active ingredient found in more than 600 over-the counter and prescription medicines, including Tylenol® and other pain relievers, cough suppressants, and cold medications. Earlier studies have linked excessive acetaminophen use with liver damage.²

In this retrospective study of more than 13,000 Americans, English researchers found that frequent acetaminophen users were more likely to have lung disease than those who seldom or never used the drug. Patients who reported regular acetaminophen use (6-29 times per month) had a 40% greater risk of having asthma, and daily users had a 75% greater risk, as well as a 72% increased risk of COPD.¹ Furthermore, a marker of lung function was decreased in acetaminophen users.¹



Acetaminophen lowers levels of the antioxidant glutathione, which is found in high concentrations in epithelial lung fluid. This may increase oxidative damage to lung tissues and precipitate subsequent respiratory disease. The study findings suggest that oxidative processes may play a role in the pathogenesis of asthma and chronic obstructive pulmonary disease.¹

—Elizabeth Wagner, ND

References

1. McKeever TM, Lewis SA, Smit HA, Burney P, Britton JR, Cassano PA. The association of acetaminophen, aspirin, and ibuprofen with respiratory disease and lung function. *Am J Resp Crit Care Med.* 2005 May 1;171(9):966-71.
2. Marzullo L. An update of N-acetylcysteine treatment for acute acetaminophen toxicity in children. *Curr Opin Pediatr.* 2005 Apr;17(2)239-45.

Green Tea May Boost Exercise Endurance



Green tea may increase exercise endurance by as much as 24% in mice, according to a recent report from Japanese researchers.¹

In this trial, researchers fed green tea extract to laboratory mice for 10 weeks and compared the ability of supplemented and control mice to swim until the point of exhaustion. The supplemented mice were able to swim longer before becoming exhausted, and improved their respiratory function and rate of fat oxidation.¹

The effects of green tea extract were dose dependent. Mice that performed the best demonstrated a 24% increase in exercise endurance. These mice consumed 0.5% of their body weight in green tea extract daily, the equivalent of about four cups of green tea daily for a 165-pound athlete. By contrast, mice that consumed 0.2% of their body weight in green tea extract experienced only an 8% increase in exercise endurance.¹ Green tea's effects were also cumulative, with the supplemented mice increasing their exercise capacity over a period of several weeks.¹

Epigallocatechin gallate (EGCG), a green tea polyphenol, also enhanced exercise endurance in the mice, and thus may mediate

some of green tea extract's effects.¹ The Japanese study confirms earlier findings that suggest a role for green tea in promoting fat burning and optimizing weight.²

—Jon VanZile

Reference

1. Murase T, Haramizu S, Shimotoyodome A, Nagasawa A, Tokimitsu I. Green tea extract improves endurance capacity and increases muscle lipid oxidation in mice. *Am J Physiol Regul Integr Comp Physiol.* 2005 Mar;288(3):R708-15.
2. Bell SJ, Goodrick GK. A functional food product for the management of weight. *Crit Rev Food Sci Nutr.* 2002 Mar;42(2):163-78.

IN THE NEWS

High Fiber Intake Cuts C-Reactive Protein Levels



High dietary fiber intake is associated with lower levels of the cardiovascular risk factor C-reactive protein (CRP), according to data from the National Health and Nutrition Examination Survey (NHANES).¹

CRP is an inflammatory marker associated with elevated risk for heart attack, stroke, peripheral arterial disease, and sudden cardiac death.² Elevated CRP levels have also been noted in people with rheumatoid arthritis, diabetes, and chronic kidney failure.³

Using NHANES data on 3,920 subjects, investigators noted that those with the highest dietary fiber intake had a 51% lower risk of having an elevated CRP level.¹ This relationship was slightly weaker after adjusting for age, smoking, physical activity, body mass index, total energy intake, and fat intake.¹

Numerous studies have found that dietary fiber may protect against coronary heart disease through various mechanisms such as lowering blood cholesterol and triglycerides, improving high blood pressure, and normalizing postprandial (after-meal) blood glucose levels.⁴ The finding that dietary fiber helps promote healthy CRP levels suggests that fiber may also protect cardiovascular health through an anti-inflammatory effect.¹

—Durk Pearson and Sandy Shaw

References

1. Ajani UA, Ford ES, Mokdad AH. Dietary fiber and C-reactive protein: findings from national health and nutrition examination survey data. *J Nutr.* 2004 May;134(5):1181-5.
2. Bassuk SS, Rifai N, Ridker PM. High-sensitivity C-reactive protein: clinical importance. *Curr Prob Cardiol.* 2004 Aug;29(8):439-93.
3. Available at: http://www.lef.org/magazine/mag2001/mar2001_report_estrogen.html. Accessed May 9, 2005.
4. Lupton JR, Turner ND. Dietary fiber and coronary disease: does the evidence support an association? *Curr Atheroscler Rep.* 2003 Nov;5(6):500-5

Broccoli, Chili Peppers May Slow Cancer Growth

Biochemicals found in broccoli and chili peppers may slow the growth of cancer cells, according to a recent presentation by University of Pittsburgh researchers.* Compounds found in these plants may be particularly useful in helping to fight pancreatic and ovarian cancers, two difficult-to-treat cancers with high mortality rates.

Sanjay Srivastava, PhD, presented his team's findings to the American Association for Cancer Research in Anaheim, CA, last spring. The researchers applied the chili pepper compound capsaicin, which is best known for making chili peppers hot, to a laboratory culture of pancreatic cancer cells. The capsaicin promoted apoptosis, or programmed cell death, in pancreatic cancer cells, but did not affect normal pancreatic cells.



The researchers also examined the effects of phenethyl isothiocyanate—a compound in cruciferous vegetables such as broccoli—on ovarian cancer cells. They found that phenethyl isothiocyanate interfered with epidermal growth factor receptor, a protein involved in the growth of ovarian and other cancers.

Compounds from chili pepper and broccoli may be useful as novel cancer-preventive agents. These findings may help explain the reduced risk of cancer in people who consume an abundance of fruits and vegetables.

—Elizabeth Wagner, ND

* Available at: http://today.reuters.com/news/newsArticle.aspx?type=healthNews&storyID=2005-04-19T202217Z_01_N19109132_RTRIDST_0_HEALTH-HEALTH-CANCER-FOOD-DC.XML. Accessed May 10, 2005.

Study to Gauge Pomegranate's Effects on PSA



Researchers are currently investigating whether pomegranate juice may help delay or prevent the reoccurrence of prostate cancer in men treated with radiation or surgery for prostate adenoma.¹

Recent studies suggest that juice from the pomegranate, a tropical fruit long prized for its health-promoting effects, possesses antioxidant and antihypertensive properties, and may protect against heart disease and certain cancers.² Scientists at the UCLA Jonsson Comprehensive Cancer Center in Los Angeles are conducting a trial to evaluate whether pomegranate juice can decrease or slow rising prostate-specific antigen (PSA) levels in men who have undergone radical prostatectomy or radiotherapy for prostate adenocarcinoma. PSA is a marker of prostate inflammation, enlargement, or cancer, and can help track the progression of prostate conditions.

Study participants will consume pomegranate juice daily for 18 months or until disease progression or side effects necessitate ending the trial. The researchers hope to discover whether pomegranate juice contains substances that may delay or prevent the reoccurrence of prostate cancer.

For more information, contact Dr. Allan Pantuck at apantuck@mednet.ucla.edu.

—Elizabeth Wagner, ND

References

1. Available at: <http://clinicaltrials.gov/ct/show/NCT00060086?order=1>. Accessed March 30, 2005.
2. Laifer S. Pomegranate: ancient fruit of life yields modern promise. *Life Extension*. January, 2005:87-91.

All Contents Copyright © 1995-2009 Life Extension Foundation All rights reserved.

LifeExtension[®]

These statements have not been evaluated by the FDA. These products are not intended to diagnose, treat, cure or prevent any disease. The information provided on this site is for informational purposes only and is not intended as a substitute for advice from your physician or other health care professional or any information contained on or in any product label or packaging. You should not use the information on this site for diagnosis or treatment of any health problem or for prescription of any medication or other treatment. You should consult with a healthcare professional before starting any diet, exercise or supplementation program, before taking any medication, or if you have or suspect you might have a health problem. You should not stop taking any medication without first consulting your physician.