

# Health Insights Today

A SERVICE OF CLEVELAND CHIROPRACTIC COLLEGE

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## Nutrition UPDATE

*When reading reports on new research, it is important to remember that no single study should be seen as providing the whole truth. The following reports offer helpful clues but in most cases further research is needed before firm conclusions can be drawn.*

### **“Eco-Atkins” Diet With Plant Proteins Yields Weight Loss and Lower Cholesterol Levels**

Changing the low-carbohydrate Atkins diet to eliminate meat, dairy and eggs by substituting plant-based protein sources helped overweight people lose weight and led to significant improvements in their lipid profiles and other cardiovascular risk factors. This “Eco-Atkins” diet was compared to a control group who ate a low-calorie, high-carbohydrate vegetarian diet including dairy and eggs. The control group lost a similar amount of weight but showed less improvement in coronary risk factors.

A total of 47 overweight hyperlipidemic men and women consumed either (1) a low-carbohydrate (26% of total calories), high-vegetable protein (31% from gluten, soy, nuts, fruit, vegetables, and cereals), and vegetable oil (43%) plant-based diet or (2) a high-carbohydrate lacto-ovo vegetarian diet (58% carbohydrate, 16% protein, and 25% fat) for 4 weeks each in a parallel study design.

The researchers reported that weight loss was similar for both diets (approximately 8.8 lbs.) However, reductions in LDL-C concentration and total cholesterol-HDL-C and apolipoprotein B-apolipoprotein AI ratios were greater for the low-carbohydrate compared with the high-carbohydrate diet (-8.1% [P = .002], -8.7% [P = .004], and -9.6% [P = .001], respectively). The authors concluded that a low-carbohydrate plant-based diet has lipid-lowering advantages over a high-carbohydrate, low-fat weight-loss diet in improving heart disease risk factors not seen with conventional low-fat diets with animal products.

Jenkins DJ, Wong JM, Kendall CW, et al. The effect of a plant-based low-carbohydrate (“Eco-Atkins”) diet on body weight and blood lipid concentrations in hyperlipidemic subjects. *Arch Intern Med.* Jun 8 2009;169(11):1046-1054.

### **Magnesium Supplements May Help Control High Blood Pressure**

In a randomized, double-blinded, placebo-controlled trial involving 155 non-diabetic overweight subjects with normal blood magnesium levels, supplementation with 300 mg of elemental magnesium, in the form of magnesium oxide, for a period of 12 weeks was found to reduce blood pressure significantly in subjects with hypertension (defined as systolic BP of 140 mm Hg or higher and diastolic BP of 90 mm Hg or higher) at baseline, but not in normo-tensive subjects. Systolic blood pressure reduced by 17.1 mmHg and diastolic reduced by 3.4 mmHg in the magnesium group, as compared to 6.7 and 0.8 mmHg reductions found in the placebo group. Magnesium was well-tolerated with no significant adverse effects reported. These results suggest that persons with hypertension may benefit from supplementation with magnesium.

Lee S, Park HK, et al. Effects of oral magnesium supplementation on insulin sensitivity and blood pressure in normo-magnesemic nondiabetic overweight Korean adults. *Nutr Metab Cardiovas Dis* 2009, April 7.

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## Increased Fruits and Vegetables Associated with Decrease in Lower Bowel Cancers

In a study involving data collected from 452,755 subjects (European Prospective Investigation into Cancer and Nutrition – EPIC), consumption of fruit and vegetables was found to be inversely associated with colorectal cancer. During an 8.8 year follow-up, 2,819 subjects were diagnosed with colorectal cancer. Comparing the highest to the lowest quintiles of fruit and vegetable consumption, the risk (hazard ratio) of colon cancer was 0.76, and the risk of colorectal cancer was 0.86. These effects may also be influenced by smoking status.

van Duijnhoven FJ, Bueno-De-Mesquita HB, et al. Fruit, vegetables, and colorectal cancer risk: the European Prospective Investigation into Cancer and Nutrition. *Am J Clin Nutr* 2009; 89(5): 1441-52.

## Vitamin D May Lower Risks of Mouth and Esophagus Cancers

In two case-control studies involving 304 subjects with squamous cell carcinoma of the esophagus (SCCE) and 804 cases of oral/pharyngeal cancer, increased dietary vitamin D intake was associated with decreased risk of SCCE and oral/pharyngeal cancer, with the greatest association found for heavy smokers and heavy alcohol drinkers. Subjects in the highest third of vitamin D intake were found to have slightly more than half the risk for SCCE and about three-quarters the risk for oral/pharyngeal cancer. Heavy alcohol drinkers in the lowest tertile of vitamin D intake were found to have significantly higher odds ratio for oral/pharyngeal cancer, as compared to those in the highest tertile of vitamin D who drank less than 3 alcoholic drinks/day.

Lipworth L, Rossi M, et al. Dietary vitamin D and cancers of the oral cavity and esophagus. *Ann Oncol* 2009 June 1; [Epub ahead of print].