

Health Insights Today

A SERVICE OF CLEVELAND CHIROPRACTIC COLLEGE

May/June 2010, Volume 3, Issue 3

Exercise and Fitness Report

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.

Adding Exercise to DASH Diet Yields Benefits Beyond Blood Pressure, Including Insulin Sensitivity and Lipid Levels

The DASH Diet (Dietary Approaches to Stop Hypertension) is widely recommended for people with high blood pressure. Based on findings that vegetarian diets are associated with decreased blood pressure, DASH is rich in fruits and vegetables and low-fat dairy products, moderate in total fat, moderate in meat, and low in saturated fat and cholesterol. In a randomized controlled trial, 144 overweight men and women with high blood pressure (130 to 159/85 to 99 mm Hg) were randomly assigned to one of the following groups: (1) DASH diet alone; (2) DASH diet with aerobic exercise and caloric restriction; or (3) usual diet controls (UC). Body composition, fitness, insulin sensitivity, and fasting lipids were measured before and after 4 months of treatment.

Participants in the DASH diet with aerobic exercise and caloric restriction condition lost weight (-8.7 kg) and exhibited a significant increase in aerobic capacity, whereas the DASH diet alone and UC participants maintained their weight (-0.3 kg and +0.9 kg respectively) and had no improvement in exercise capacity. DASH diet with aerobic exercise and caloric restriction demonstrated lower glucose levels after the oral glucose load, improved insulin sensitivity, and lower total cholesterol and triglycerides compared with both DASH diet alone and UC, as well as lower fasting glucose and low-density lipoprotein cholesterol compared with UC. DASH diet alone participants generally did not differ from UC in these measures.

The authors concluded that combining the DASH diet with exercise and weight loss resulted in significant improvements in insulin sensitivity and lipids, and that despite clinically significant reductions in blood pressure, the DASH diet alone, without caloric restriction or exercise, resulted in minimal improvements in insulin sensitivity or lipids.

Blumenthal JA, Babyak MA, Sherwood A, et al. Effects of the Dietary Approaches to Stop Hypertension Diet Alone and in Combination With Exercise and Caloric Restriction on Insulin Sensitivity and Lipids. *Hypertension*. Mar 8 2010. [epub ahead of print]

Exercise Helps Depressive Symptoms

A group of Brazilian researchers investigated the influence of physical exercise on depressive symptoms and functional fitness in a sample of 118 elderly people enrolled in a physical exercise program run by public sector health centers, who had been receiving treatment for up to 1 year and 4 months and were assessed at predefined intervals, up to a maximum of five times. Evaluations were carried out using the Geriatric Depression Scale (GDS-15); International Physical Activity Questionnaire (IPAQ) and the physical test battery proposed by AAHPERD (American Alliance for Health, Physical Education, Recreation and Dance).

Depression scores decreased. However, a statistically significant difference was only detected among those who attended 75% or more of the treatment sessions. Analysis also demonstrated that the tendency for overall mean functional fitness to increase was statistically significant. The authors concluded that there is a positive effect from physical exercise in reducing depressive symptoms and improving functional fitness.

Health Insights Today

A SERVICE OF CLEVELAND CHIROPRACTIC COLLEGE

May/June 2010, Volume 3, Issue 3

Page 2

Justino Borges L, Bertoldo Benedetti TR, Zarpellon Mazo G. [The influence of physical exercise on depressive symptoms and functional fitness in elderly residents of south Brazil.]. *Rev Esp Geriatr Gerontol*. Mar 3 2010. [epub ahead of print]

Pilates Exercise Improves Muscle Endurance and Flexibility

Researchers in Minnesota studied the effects of Pilates exercise on abdominal endurance, hamstring flexibility, upper-body muscular endurance, posture, and balance. Fifty subjects were recruited to participate in a 12-week Pilates class, which met for 1 hour 2 times per week. Subjects were randomly assigned to either the experimental (n = 25) or control group (n = 25). Subjects performed the essential (basic) mat routine consisting of approximately 25 separate exercises focusing on muscular endurance and flexibility of the abdomen, low back, and hips each class session. At the end of the 12-week period, a 1-way analysis of covariance showed a significant level of improvement in all variables except posture and balance.

The investigators reported statistically significant increases in abdominal endurance, hamstring flexibility, and upper-body muscular endurance, but no improvements in either posture or balance when compared with the control group. They concluded that individuals can improve their muscular endurance and flexibility using relatively low-intensity Pilates exercises that do not require equipment or a high degree of skill and are easy to master and use within a personal fitness routine.

Kloubec JA. Pilates for improvement of muscle endurance, flexibility, balance, and posture. *J Strength Cond Res*. Mar 2010;24(3):661-667.