



## Exercise Prevents Disease

You probably know that exercise is good for you, but did you know that it can both improve the quality of your life *and* reduce the risks of developing diseases? Regularly participating in moderate physical activity can reduce the risk of coronary heart disease, hypertension, some cancers and type 2 diabetes.

Below, Len Kravitz, PhD, program coordinator of exercise science and a researcher at the University of New Mexico, discusses some of the diseases exercise can help prevent. For more information on developing a fun, efficient exercise program, please contact a certified personal trainer or exercise instructor.

### Cardiovascular Disease

The leading health-related cause of death for men and women in the U.S. is cardiovascular disease, according to the American College of Sports Medicine. The good news is that higher levels of cardiovascular fitness are associated with a 50% reduction in cardiovascular disease (CVD) risk in men, says research by Myers and colleagues in the December 2004 issue of *The American Journal of Medicine*. Plus, increasing physical activity to a total of at least 1,000 kilocalories per week is associated with a 20% reduction of mortality in men. What about women? Physically inactive middle-aged females who did less than 1 hour of exercise per week doubled

their risk of mortality from CVD compared with their physically active female counterparts, note Hu and colleagues in the December 23, 2004, issue of *The New England Journal of Medicine*.

### Cancer

Exercise is connected with a lower occurrence of colon cancer in men and women, and of breast cancer in women. In the November 2003 issue of *Medicine & Science in Sports & Exercise*, Lee reports that moderate to vigorous physical activity has a greater protective effect than lower intensities of physical activity. Lee notes that physically active men and women have a 30%–40% reduction in relative risk for colon cancer compared with their inactive counterparts. It seems that about 30–60 minutes of moderate to vigorous exercise per day is needed for this risk reduction, with higher levels of exercise showing even lower risk. In addition, physically active women have a 20%–40% reduction in relative risk for breast cancer compared with their inactive counterparts. It also appears that the 30–60 minutes of moderate to vigorous exercise per day is needed to generate this level of risk reduction.

### Diabetes

Elevated insulin and blood glucose levels are involved in the development of non-insulin-dependent diabetes mellitus. When insulin function starts breaking down, the body's blood sugar levels rise, leading eventually to the onset of "prediabetes" and then type 2 diabetes. Regular aerobic exercise meaningfully increases insulin sensitivity and glucose metabolism, which means the body's cells can more efficiently transport glucose into the cells of the liver, muscle and



### preventing hypertension

Hypertension (abnormally high blood pressure) is a major health problem. Elevated systolic and diastolic blood pressure levels are associated with a higher risk of developing coronary heart disease, congestive heart failure, stroke and kidney failure. According to research by Bouchard & Despres in *Research Quarterly for Exercise and Sport* (volume 66, 1995), a person doubles his chance of developing these diseases when blood pressure is 140/90 millimeters of mercury (mm Hg). The good news is that in many cases, you can reduce elevated blood pressure by decreasing weight and lowering alcohol and salt intake in your diet. Moderate-intensity aerobic exercise performed 3–5 times per week for 30–60 minutes per session appears to be effective in reducing blood pressure (when it's elevated).

adipose tissue, according to Steyn and colleagues in *Public Health and Nutrition* (issue 1A, 2004). Improvements in glucose metabolism with strength training, independent of alterations in aerobic capacity or percent body fat, have also been shown, according to research by Pollock and colleagues in the February 2000 issue of *Circulation*. It appears that both resistance training and aerobic exercise offer a strong protective role in the prevention of non-insulin-dependent diabetes mellitus. ■

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