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Physiology 621

August 31 , 2016

Effects of Diet and Exercise

The scientific evidence that shows the beneficial effects of exercise is not in dispute. For most adults, the benefits of exercise far outweigh any risks. There have been many studies regarding the positive mood-enhancing effect of regular exercise. (Otto 3)

Regular cardiovascular exercise, such as brisk walking, can reduce both overall fat and abdominal fat. Abdominal fat is one of the most dangerous forms of being overweight because it can lead to heart disease, stroke, or type 2 diabetes. According to Melinda Irwin, Assistant Professor at Yale School of Medicine’s Department of Epidemiology and Public Health, “previously sedentary women who exercise for over 195 minutes per week lost 6.9 percent of intra-abdominal body fat, as opposed to the less significant losses and gains of women in the control group.”[[1]](#footnote-1)

The study, which was published in the *Journal of the American Medical Association* (JAMA) January 2003 Issue, looked at 173 physically inactive women in Seattle, Washington who were between the ages of 50 and 75 from 1997-2001. Out of the two groups, the active group exercised aerobically five days a week and the control group stretched moderately as the only form of exercise and did so only one day a week.

The researchers measured total body fat, abdominal fat, and changes in body weight at the start of the study. After one year, the same measurements were taken. Those women who were active and who increased their fitness level by more than 16 percent lost 10.8 percent of the undesirable fat around the stomach and waistline, and 84 percent of the participants in the active group improved their cardiovascular fitness level.

Exercise also has other positive long-term effects on the body in addition to slimming the waistline. “Exercise may counteract the aberrant metabolic profile associated with intra-abdominal body fat,” says Irwin.[[2]](#footnote-2)

Other positive effects of exercise include the body’s increased efficiency in transferring oxygen to muscle. During strenuous exercise, coronary blood flow increases substantially (Mohrman 195). Consistent levels of aerobic exercise can also produce endorphins in the brain, stimulating a feeling of wellness and fulfillment in addition to boosting strength and energy.

The level of successful weight loss attributed to exercise and activity is promising news for the more than 50 percent of the U.S. adult population that is overweight. It is also good news for those who have lost weight in the past through diet, but who are now concerned about regaining the weight. This concern is common among those who do not incorporate physical activity into their daily routines. Exercise like walking is available to almost everyone; it is free and usually easy to do. A quick-paced walk or jog several days a week can boost fitness levels and aid in maintaining good health.

A recent study by the National Institutes of Health used a mathematical computer model of human metabolism to analyze contestants on the reality television program “The Biggest Loser.” The study results found that modest diet and exercise can sustain weight loss. (Services)

*Work Cited*

# Bibliography

Mohrman, David, and Lois Heller. *Cardiovascular Physiology, Seventh Edition*. New York: McGraw- Hill Professional, 2010.

Otto, Michael, and Jasper A. J. Smits. *Exercise for Mood and Anxiety: Proven Strategies for Overcoming Depression and Enchancing Well- Being*. New York: Oxford University Press, USA, 2011.

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1. The objective of the study was to examine the effects of exercise on total and intra- abdominal body fat overall and by the level of exercise. [↑](#footnote-ref-1)
2. Physical activity may provide a low-risk method of preventing weight gain. Unlike diet- included weight loss, exercise-induced weight loss increases cardiorespiratory fitness levels. [↑](#footnote-ref-2)