



## **Just Ten Minutes of Physical Activity A Day Has a Major Impact**

**Even small amounts of physical activity — approximately 75 minutes per week — can improve cardiorespiratory fitness levels of sedentary overweight individuals, a study shows.**

While this level of exercise is lower than that currently recommended to produce weight loss, the current findings may be used to encourage those people who do not exercise at present to start doing some form of physical activity, the authors advise.

The authors point out that improvements in fitness are associated with a reduction in the risk for cardiovascular disease, diabetes and death, and that, as physical activity is the main determinant of fitness in adults, continuing to refine efficient, safe, and acceptable exercise regimens is of substantial public health importance. Whereas the National Institutes of Health (NIH) Consensus Development Panel recommends at least 30 minutes of moderate-intensity physical activity on most days of the week, the authors note that recent reports suggest that 60 minutes of exercise each day may be necessary to prevent weight gain. But they add that the effect of much lower amounts of exercise has not been well studied.

The team therefore conducted a trial in which 464 sedentary postmenopausal women who were overweight or obese and had raised blood pressure were randomized to 3 different durations of moderate exercise (cycling or walking) or to a nonexercise control group for 6 months. The 3 exercise levels were designed to achieve energy expenditure of 4 kcal/kg (400 calories), 8 kcal/kg (800 calories), or 12 kcal/kg (1200 calories) per week, which corresponded to 50%, 100%, and 150% of NIH-recommended exercise levels. Aerobic fitness was assessed on a cycle ergometer and quantified as peak absolute oxygen consumption. Results showed a graded increase in fitness levels with increased exercise levels.

Church and colleagues report that these improvements in fitness occurred at a modest training intensity and during a time of life when fitness is decreasing at 1% to 2% per year. They also point out that the adherence rate was high and dropout rate was low, suggesting that the exercise regimens followed in this study were realistic and achievable. In addition, they found that the physical activity–fitness dose response relation to be similar across age, race, weight, baseline fitness, and hormone therapy subgroups.

Although the changes in fitness shown in this study were not accompanied by a reduction in blood pressure, weight, or most other cardiovascular risk factors, those who exercised did show a decrease in waist circumference, which the authors say is important given the increased risk for insulin resistance, diabetes, metabolic syndrome, and mortality associated with excess abdominal fat.

"Perhaps the most striking finding of our study is that even activity at the 4-kcal/kg per week level (approximately 72 min/wk) was associated with a significant improvement in fitness compared with women in the nonexercise control group," the authors write.

They note that nearly everyone understands that there are health benefits associated with physical activity, yet still about 20% of US adults do not engage in any physical activity at all. "Data presented in our study show that even 72 minutes of moderate-intensity physical activity per week accumulated over about 3 days has a significant effect on fitness in previously sedentary postmenopausal women. This information can be used to support future recommendations and should be encouraging to sedentary adults who find it difficult to find the time for 150 minutes of activity per week, let alone 60 minutes per day," they add.

But Dr. Lee concludes, "Although current knowledge regarding the dose-response relation between physical activity and health remains incomplete, the study by Church et al does provide important information on the dose of physical activity to improve physical fitness, a strong predictor of chronic disease and premature mortality. This may be succinctly summarized for patients and clinicians as 'Even a little is good; more may be better!'"

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