

## Fitness Levels Decline With Age, Especially After 45

ScienceDaily (Oct. 30, 2009) — Men and women become gradually less fit with age, with declines accelerating after age 45, according to a report in the October 26 issue of *Archives of Internal Medicine*, one of the JAMA/Archives journals. However, maintaining a healthy body mass index (BMI), not smoking and being physically active are associated with higher fitness levels throughout adult life.

"The U.S. population is aging and is becoming more obese and sedentary," the authors write as background information in the article. "It is well documented that the cardiorespiratory fitness of men and women declines with age and that body composition and habitual physical activity are related to cardiorespiratory fitness." Low fitness levels increase the risk of diseases and interfere with older adults' ability to function independently.

Andrew S. Jackson, P.E.D., of the University of Houston, and colleagues studied 3,429 women and 16,889 men age 20 to 96 who participated in the Aerobics Center Longitudinal Study (ACLS) between 1974 and 2006. During the study, participants completed between two and 33 health examinations that included counseling about diet, exercise and other lifestyle factors along with a treadmill exercise to assess fitness.

Statistical models showed that while fitness levels declined continuously over time, the decrease was not linear or steady -- cardiorespiratory fitness declined more rapidly after age 45. The decline for men was greater than that for women.

The results also "showed that being active, keeping a normal BMI and not smoking were associated with substantially higher levels of cardiorespiratory fitness during the adult life span studied," the authors write. "Being inactive and having a high BMI were associated with a lower age at which an individual could be expected to reach threshold cardiorespiratory fitness levels associated with substantially higher health risks."

Given the high rates of obesity and low levels of physical activity previously observed in the general population, the results also suggest that more men and women will reach the fitness level designated by the Social Security Administration as representing disability at a younger

age, the authors note. "These data indicate the need for physicians to recommend to their patients the necessity to maintain their weight, engage in regular aerobic exercise and abstain from smoking," they conclude.

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### Journal reference:

1. Andrew S. Jackson; Xuemei Sui; James R. Hebert; Timothy S. Church; Steven N. Blair. **Role of Lifestyle and Aging on the Longitudinal Change in Cardiorespiratory Fitness.** *Arch Intern Med*, 2009; 169 (19): 1781-1787 [[link](#)]

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JAMA and Archives Journals (2009, October 30). Fitness Levels Decline With Age, Especially After 45. *ScienceDaily*. Retrieved November 6, 2009, from <http://www.sciencedaily.com/releases/2009/10/091026161846.htm>