

Study links cardiorespiratory fitness, stroke risk

3 June 2010

(PhysOrg.com) -- A study by researchers at the University of South Carolina's Arnold School of Public Health has found that men with low levels of cardiorespiratory fitness are 60 percent more likely to die of stroke than men who are moderately fit or highly fit.

The findings of the study, led by John Siervedes, an Arnold School doctoral student, were presented June 2 at American College of Sports Medicine's 57th annual meeting in Baltimore.

While [men](#) who were physically active had fewer strokes, cardiorespiratory fitness was shown to be a more reliable predictor of stroke risk. Researchers analyzed data on 45,706 men aged 18 to 100 years, grouped as having low, moderate or high levels of cardiorespiratory fitness as measured by a maximal treadmill exercise test.

Based on self-reported information, participants were deemed as sedentary, walker-jogger-runners or sports participants. The study was controlled for age, cholesterol levels, diabetes, smoking, alcohol use and family history of cardiovascular disease.

The rate of fatal stroke among low-fit men was 3.2 per 10,000 man-years, compared with 2.0 for both moderately and highly fit men. Non-fatal stroke rates were 10.8, 8.9 and 6.4 for low, moderate and high fitness levels, respectively. Incidence of total stroke showed a strong inverse relationship with increasing levels of fitness. While men who ran, jogged, walked or played sports tended to have higher fitness levels, activity levels alone were not an independent predictor of stroke risk.

"These findings suggest that health professionals might consider assessing their patients' cardiorespiratory fitness and counseling them to improve fitness levels to prevent stroke," Sieverdes said. "While physical activity has been shown to reduce health risks, this study concluded that [fitness](#) level was closely associated with stroke

prevention."

Data for the study came from participants who were enrolled in the Aerobics Center [Longitudinal Study](#) in Dallas, Texas, between 1970 and 2001 and had no history of [stroke](#), myocardial infarction or cancer at their baseline visits.

Provided by University of South Carolina

APA citation: Study links cardiorespiratory fitness, stroke risk (2010, June 3) retrieved 27 November 2021 from <https://medicalxpress.com/news/2010-06-links-cardiorespiratory.html>

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