

High levels of activity aid arterial functioning, might help women more than men

May 31 2012

Indiana University researchers found that the highly active middle-aged subjects in their study appear to avoid the arterial stiffening -- when arteries become less compliant as blood pumps through the body -- that typically comes with aging.

A reduction in compliance of the body's large [arteries](#) has been shown to occur with age and with inactivity. It also is considered a risk factor, predictive of future cardiovascular disease, such as [high blood pressure](#) and stroke. The study compared the arterial compliance of highly active swimmers with that of people who reported being only moderately active or completely inactive. The difference between the highly active participants and the others was significant, said Maleah Holland, a graduate student in the Counsilman Center at IU Bloomington, but there was little difference in compliance in the highly active group regardless of age or sex.

"This reinforces the idea that activity could be more influential than aging on some [health factors](#)," said Joel Stager, professor and director of the Counsilman Center in the School of Health, Physical Education and Recreation's Department of [Kinesiology](#).

While there was little difference in arterial compliance between men and women in the highly active group, Holland found a significant difference between men and women in the inactive or moderately active group,

with men faring better than the women.

"Oddly, women, particularly the inactive women, show the greatest risk for [cardiovascular disease](#) as compared with other groups," Holland wrote in her research report. "Thus, conversely, habitually high levels of physical activity may pose a greater benefit for women than for men." This may have been because the inactive women were more sedentary than the men classified as inactive.

The study involved 21 men and 28 women. The 33 highly active subjects were U.S. Master Swimmers who reported more than 200 minutes of [vigorous activity](#) a week. For comparison purposes, jogging would be considered a moderate level of activity, while interval training, which combines shorter but more intense periods of running with rest, would be considered vigorous activity.

Holland will discuss her poster presentation at 8 a.m. Thursday, May 31. Co-authors are Stager, David A. Tanner, Colleen M. McCracken and Hao Guo, Department of Kinesiology in the School of HPER, and Peter R. Finn, Department of Psychological and Brain Sciences in the College of Arts and Sciences at IU Bloomington.

Provided by Indiana University

Citation: High levels of activity aid arterial functioning, might help women more than men (2012, May 31) retrieved 1 May 2024 from <https://medicalxpress.com/news/2012-05-high-aid-arterial-functioning-women.html>

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