

Regular exercise may be more beneficial for men than post-menopausal women

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The blood vessels of middle-aged men and women adapt differently to regular exercise according to new research being presented today at the British Cardiovascular Society conference in Manchester.

Researchers at Loughborough University examined the effects of regular [exercise](#) training on the [blood vessels](#) of 12 men and post-menopausal [women](#). Blood pressure and arterial stiffness were assessed before and one hour after a brisk walk.

Their preliminary findings suggest that arterial stiffness, an independent risk factor for [heart](#) disease, is higher in women compared with age-matched men. A single bout of brisk walking improved arterial stiffness and [blood](#) pressure in both groups, however, arterial stiffness remained higher in women. Interestingly, the improvements in arterial stiffness were related to changes in blood pressure in men only, suggesting possible sex-differences in how the blood vessels adapt and respond to exercise.

Research has shown that regular physical activity helps reduce the stiffening of the arteries, which in turn lowers a person's risk of developing heart or circulatory disease. However, the blood vessels of men and women appear to adapt differently to regular exercise, with post-menopausal women demonstrating less exercise-associated benefits than men.

The researchers are now looking at whether daily folic acid supplements could help postmenopausal women to reduce their risk by relaxing the blood vessels and as such lowering [arterial stiffness](#) and reducing strain on the heart.

Jen Craig, the Ph.D. student undertaking the research at Loughborough University under the lead of Dr. Emma O'Donnell, said: "Regular physical activity is associated with lower risk of cardiovascular disease. However, regular exercise does not seem to benefit the blood vessels of post-menopausal women as much as it does their male counterparts. If we are to help women to decrease their risk of heart disease we need to consider alternative strategies that may enable these women to maximise

their benefits from engaging in [regular exercise](#)."

Professor Jeremy Pearson, Associate Medical Director at the British Heart Foundation, said: "This research adds to our understanding of the relationship between physical activity and heart disease as we get older. If you're more physically active you give yourself the best chance of a heart-healthy retirement. And although post-menopausal women don't see quite the same exercise benefits as men, staying active will still reduce their overall risk of developing heart disease."

Provided by British Heart Foundation

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