

# Physical activity may attenuate menopause-associated atherogenic changes

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A new study on menopausal women shows that leisure-time physical activity is associated with a healthier blood lipid profile. However, results suggest that leisure-time physical activity does not seem to

entirely offset the unfavorable lipid profile changes associated with the menopausal transition.

Women experience a rapid increase in [cardiovascular disease](#) (CVD) risk after the onset of menopause. This observation suggests the presence of factors in middle-aged women that accelerate the progression of CVD independent of chronological aging.

"It is well known that [physical activity](#) has [health benefits](#), yet it is less clear to what extent physical activity can prevent the negative changes seen in blood [lipid](#) profiles during the menopausal transition," says Matthew Jergenson, MD, from the University of Minnesota Medical School, Minneapolis, Minnesota. "The present study examined [menopausal women](#) in the city of Jyväskylä, Finland, to explore the role of leisure-time physical activity on CVD risk factors."

## **ERMA study examines the effects of menopause**

The present study is part of the Estrogenic Regulation of Muscle Apoptosis (ERMA) study, which examines the role of menopause on body composition, leisure-time physical activity and the risk of metabolic diseases.

"Based on our findings, leisure-time physical activity was associated with a healthier blood lipid profile," explains postdoctoral researcher Sira Karvinen from the Gerontology Research Center, Faculty of Sport and Health Sciences, University of Jyväskylä, Finland. "Yet advancing menopausal status predicted a less healthy lipid profile, suggesting that leisure-time physical activity does not entirely offset the unfavorable lipid profile changes associated with the menopausal transition."

More specifically, higher leisure-time physical activity was associated with lower total cholesterol, LDL, triglyceride and fasting [blood glucose](#)

[levels](#) as well as higher HDL levels. Advancing menopausal status, in turn, was associated with higher total cholesterol, triglyceride and LDL levels.

"However, leisure-time physical activity may attenuate the unfavorable atherogenic changes in the serum CV risk factors of healthy middle-aged women," Jergenson and Karvinen state. "Hence one should not forget sport-related hobbies at middle age."

The present study is part of the Estrogenic Regulation of Muscle Apoptosis (ERMA) study, a population-based cohort study (n = 886) of middle-aged Caucasian women between 47 and 55 years of age in the Jyväskylä area. In addition, 193 women composed a longitudinal study population that was followed over the menopausal transition. Physical activity was assessed both by self-reported questionnaires and accelerometer monitoring. Serum lipid profiles (total cholesterol, LDL, HDL, triglycerides, fasting blood glucose) were analyzed to quantify cardiovascular risk factors.

**More information:** Sira Karvinen et al. Menopausal Status and Physical Activity Are Independently Associated With Cardiovascular Risk Factors of Healthy Middle-Aged Women: Cross-Sectional and Longitudinal Evidence, *Frontiers in Endocrinology* (2019). [DOI: 10.3389/fendo.2019.00589](https://doi.org/10.3389/fendo.2019.00589)

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