

Selenium as a predictor of metabolic syndrome in middle-aged women

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A new research paper titled "Selenium as a predictor of metabolic syndrome in middle age women" has been published in *Aging*.

Metabolic syndrome (MetS) is a widespread clinical entity that has become almost a global epidemic. Selenium plays an important role in metabolic homeostasis. It has been suggested that it may also affect the expression and activity of PPAR- γ —an important mediator in energy balance and cell differentiation. In this new study, researchers Daria Schneider-Matyka, Anna Maria Cybulska, Małgorzata Szkup, Bogumiła Pilarczyk, Mariusz Panczyk, Agnieszka Tomza-Marciniak, and Elżbieta Grochans from Pomeranian Medical University in Szczecin, West Pomeranian University of Technology and Medical University of Warsaw aimed to analyze the relationships between these variables in the context of the health of women, for whom the risk of MetS increases with age.

"The aim of this study was to search for a relationship between [selenium](#) concentrations and MetS, and to assess the impact of PPAR- γ on the incidence of MetS with regard to the moderating role of selenium," the researchers explain.

The study involved 390 women in middle age. The stages of study: a survey-based part; anthropometric measurements; analysis of biological material (blood) in terms of glycemia, triglyceride, HDL, and selenium levels, as well as genetic analysis of the PPAR- γ polymorphisms. The researchers found that selenium may moderate the effect of the G allele of the PPAR- γ gene on the occurrence of elevated [waist circumference](#) (OR=1.030, 95%CI 1.005-1.057, p=0.020); and the effect of the C (OR=1.077, 95%CI 1.009-1.149, p=0.026) and the G alleles (OR=1.052, 95%CI 1.025-1.080, p

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