



Universidad de Granada

UGR researchers show that just 5 months of exercise can reduce fat and cardiovascular risk in obese children

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A study led by researchers from the UGR's Department of Physical Education and Sports, in collaboration with paediatricians from the Paediatric Endocrinology Unit of the "Virgen de las Nieves" University Hospital in Granada and external national and international partners, has shown that schoolchildren who exercise improve their physical fitness and health.



The study, published in the prestigious scientific journal JAMA Network Open, reveals that the regular physical exercise the children undertook during the five-month programme enabled them to reduce their cardiometabolic risk, LDL cholesterol, body mass index, fat mass and visceral fat, and to improve their aerobic capacity.

Improved health and fitness

“One of the most striking findings is that almost 80% of the children who completed the physical exercise programme achieved a meaningful reduction in the amount of total fat,” explains Francisco B. Ortega, a professor at the UGR's Department of Physical Education and Sports and principal investigator of the project.

“In addition, we found that a significant number of schoolchildren at a high risk of metabolic syndrome were able to move out of this risk group as a result of following the physical exercise programme. A similar trend was observed in both boys and girls who went from poor physical fitness to optimal physical fitness, based on aerobic capacity,” says Jairo H. Migueles, a member of the Department of Physical Education and Sports at the UGR and one of the principal investigators of the study.

Treating obesity and preventing metabolic diseases

The physical exercise programme undertaken in the study was based on group games involving simple activities such as running on an outdoor track and moderate

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to high intensity strength exercises, without any advanced equipment. In other words, the programme was carried out in conditions similar to those found in the school environment or in after-school activities, meaning that the programme is socially transferable to an everyday context. “This study shows the importance of including physical activity in the treatment of childhood obesity and preventing the development of metabolic problems,” adds Cristina Cadenas Sánchez, another researcher who coordinated the study.

The prevalence of excess weight and obesity in children has increased in recent decades and has become a global health concern. Excess weight affects 1 in 3 children worldwide, and Spain is one of the European countries with the highest rate of children with this problem. Children with obesity face a higher risk of developing cardiovascular disease or type 2 diabetes, as well as experiencing significant functional limitations that will affect their quality of life.

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Full text of the study:

Migueles, J. H., Cadenas-Sanchez, C., Lubans, D. R., Henriksson, P., Torres-Lopez, L. V., Rodriguez-Ayllon, M., Plaza-Florido, A., Gil-Cosano, J. J., Henriksson, H., Escolano-Margarit, M. V., Gómez-Vida, J., Maldonado, J., Löf, M., Ruiz, J. R., Labayen, I., & Ortega, F. B. (2023). Effects of an Exercise Program on Cardiometabolic and Mental Health in Children With Overweight or Obesity: A Secondary Analysis of a Randomized Clinical Trial. *JAMA Network Open*, 6(7), e2324839.
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