

Poor breakfast quality has a negative effect on cardiovascular health in childhood

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Researchers at the Institute for Innovation and Sustainable Development in the Food Chain (IS-FOOD) of the Public University of Navarre (NUP/UPNA) have published a piece of research in which they show

that the nutritional quality of breakfast is associated with significant cardiovascular and metabolic risk factors in overweight children (even in those who are fit and who do exercise every day).

The authors of the article published in the journal *Nutrients* saw that the children who ate breakfasts of lower nutritional quality and greater [energy density](#) (understood as more calories per gram of food) had higher levels of cholesterol and [uric acid](#) and greater insulin resistance. The researchers concluded that the nutrition education programmes to improve cardiovascular health in the paediatric population should include specific recommendations geared towards reducing the consumption of foods that are high in [energy](#) density during the first meal of the day.

The authors of this article, attached to the Nutrition, Physical Exercise and Health Group (Elikos) of the IS-FOOD Institute, are Lide Arenaza-Etxeberria, Idoia Labayen-Goñi, María Medrano-Echeverría and Maddi Osés-Recalde, together with researchers from the University of Granada.

"Breakfast is not just the first meal of the day but also the one that can be regarded as the most important," said Idoia Labayen, lecturer in the Department of Health Sciences. "Despite that, many children go to school without having had any [breakfast](#), which means that by lunchtime they are hungrier and may eat more than they should. The absence of breakfast has been previously correlated with excess fat and other associated disorders, so promoting breakfast is already being used as part of the strategy in preventing child obesity."

Breakfast quality

Yet aside from having breakfast or not, the quality of the first meal of the day is also important and that was the subject of this piece of research. "We assessed the eating habits at breakfast of a total of 203

overweight schoolchildren between the ages of 8 and 12," said Idoia Labayen. "With these data we saw that 13% of the children who did not have breakfast every day and who consumed breakfasts of lower nutritional quality and greater energy density had [higher levels](#) of cholesterol and uric acid in the blood and greater insulin resistance. In fact, the higher energy density of breakfast has negative repercussions on glucose metabolism, even in those children that met the daily recommendations on physical activity: 60 minutes of moderate to vigorous intensity."

The researchers stressed that nutrition education programmes designed to improve the cardiovascular and metabolic health of the infant population should focus on reducing the consumption of high energy density food, such as "ultra-processed products, commonly present in [children's](#) breakfasts," said Idoia Labayen.

More information: Victoria Muñoz-Hernandez et al. Influence of Physical Activity on Bone Mineral Content and Density in Overweight and Obese Children with Low Adherence to the Mediterranean Dietary Pattern, *Nutrients* (2018). [DOI: 10.3390/nu10081075](https://doi.org/10.3390/nu10081075)

Provided by Elhuyar Fundazioa

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