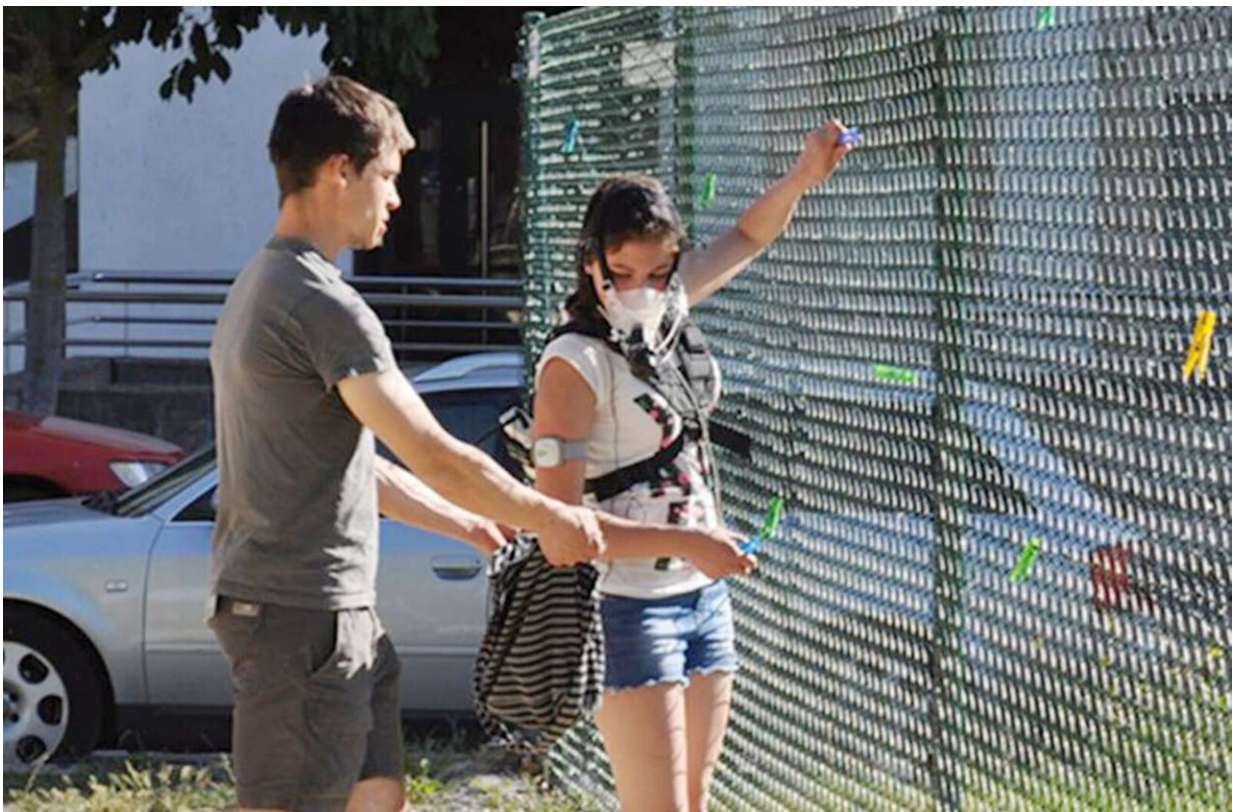


# Division of tasks in Paleolithic groups not influenced by energy expenditure differences between boys and girls

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Volunteers simulating fruit gathering. Credit: Zorrila-Revilla et al

Researchers from the Paleophysiology and Ecology of Hominins and Paleocology of Mammals groups at the Centro Nacional de

Investigación sobre la Evolución Humana (CENIEH) have recently published a paper in the journal *Human Nature* in which they highlight that the sexual division of tasks among the youngest members of Paleolithic hunter-gatherer groups would not have been influenced by differences in energy expenditure between boys and girls.

The sexual division of tasks is widespread among modern hunter-gatherer groups. Between the ages of seven and 10, boys and [girls](#) start to take on different productive activities. Boys gradually leave off [gathering](#), while girls will continue with this throughout their lives. It is usually assumed that something similar would have occurred during the Paleolithic.

To carry out this study, the researchers measured the energy expenditure of 42 boys and girls aged eight to 14, during an activity that simulated the collection of fruit, a common task at these ages among hunter-gatherer groups.

"It might be thought that the sexual division of tasks at these ages could be explained because the task in question is energetically more expensive for one sex than for the other. But this is not so. In our experiment, boys and girls expended the same amount of energy during the simulated gathering. This fact has important implications for the ecology of their behavior," explains Ana Mateos, leader of the Paleophysiology and Ecology of Hominins Group.

In the years before the spurt of adolescence, growth slows down and a small body size is maintained. Guillermo Zorrilla-Revilla, co-author of this study, says, "It is well known that larger individuals expend more energy than smaller ones when performing the same [task](#). Starting to practice skills like gathering at these ages enables them to be acquired with a relatively low energy cost."

Having excluded differences in energy expenditure as a possible explanation of the sexual division, the authors contend that this practice could be related to learning. Many of the tasks of subsistence require prolonged periods of learning through practice. Improving these skills at an early age, when body size is small, allows learning to be accomplished with low [energy](#) cost.

"Boys do not give up gathering because their [energy expenditure](#) is higher than girls," but rather because they move on to practicing and learning other activities to which they will devote themselves as adults," says Jesús Rodríguez, leader of the Paleoecology of Mammals Group.

**More information:** Guillermo Zorrilla-Revilla et al, Gathering Is Not Only for Girls, *Human Nature* (2021). [DOI: 10.1007/s12110-021-09411-x](#)

Provided by CENIEH

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