

Meat eating led to earlier weaning, helped humans spread across globe

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When early humans became carnivores, their higher-quality diet allowed mothers to wean babies earlier and have more children, with potentially profound effects on population dynamics and the course of human evolution, according to a study published Apr. 18 in the open access journal *PLoS ONE*.

In a comparison of 67 [mammalian species](#), including humans, apes, mice, and [killer whales](#), among many others, researchers from Lund University in Sweden found a clear correlation between carnivory and earlier weaning.

"Eating meat enabled the breast-feeding periods and thereby the time between births to be shortened," said Elia Psouni, lead author of the study. "This must have had a crucial impact on [human evolution](#)."

Among natural fertility societies, the average duration of breast-feeding is 2 years and 4 months. This is not much in relation to the maximum lifespan of our species, around 120 years. It is even less if compared to our closest relatives: female chimpanzees suckle their young for 4 to 5 years, whereas the maximum lifespan for chimpanzees is only 60 years.

Many researchers have tried to explain the relatively shorter breast-feeding period of humans based on social and behavioral theories of parenting and family size. But the Lund group has now shown that the young of all species stop suckling when their brains have reached a particular [developmental stage](#). The difference is that carnivores –

categorized as species for which at least 20 per cent of the energy content of their diet comes from meat – reach this point earlier than herbivores or omnivores due to their higher quality diet. Therefore, the different weaning times for humans and the great apes seems to result simply from the fact that, as a species, humans are carnivores, whereas gorillas, orangutans and chimpanzees are herbivores or omnivores.

"That humans seem to be so similar to other animals can of course be taken as provocative," Psouni says. "We like to think that culture makes us different as a species. But when it comes to breast-feeding and weaning, no social or cultural explanations are needed; for our species as a whole it is a question of simple biology."

She is careful to emphasize that their results provide insight into how carnivory may have contributed to [early humans](#) spreading on Earth, and says nothing about what humans today should or should not eat.

More information: Psouni E, Janke A, Garwicz M (2012) Impact of Carnivory on Human Development and Evolution Revealed by a New Unifying Model of Weaning in Mammals. *PLoS ONE* 7(4): e32452. [doi:10.1371/journal.pone.0032452](https://doi.org/10.1371/journal.pone.0032452)

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