

Study shows infants' microbiomes shaped by physical contact with caregivers

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A new study led by researchers at UCLA Health found that early life caregiving experiences including skin-to-skin contact at birth, number of individuals in physical contact with the infant at birth, and the amount of time infants were in physical contact with caregivers were significantly associated with the composition of the infant gut microbiome up to six months of age. The work is [published](#) in the *American Journal of Biological Anthropology*.

These factors explained up to 11% of variation in the microbiome among infants and were associated with altered abundance of important early life gut bacteria such as Bifidobacterium.

Previous research has shown that having multiple [caregivers](#) beyond [biological parents](#) benefits infants' health, but the underlying biological mechanism remains unknown. The researchers investigated whether an infant's contact with a caregiver influenced the composition of their microbiome.

While other research has focused on how the mode of birth delivery impacts the microbiome, this is believed to be the first study to observe how a caregiver's role within the first couple of weeks affects infants' health.

The researchers surveyed the early life caregiving environment two weeks after [birth](#). They then collected and sequenced stool samples at two weeks, and two, six, and 12 months of age.

Given these findings, the researchers hope to further explore the social transmission of microbes.

More information: Kyle S. Wiley et al, Contact with caregivers is

associated with composition of the infant gastrointestinal microbiome in the first 6 months of life, *American Journal of Biological Anthropology* (2023). [DOI: 10.1002/ajpa.24858](https://doi.org/10.1002/ajpa.24858)

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