

Newborns with higher hair cortisol levels take longer to fall asleep, finds study

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Cortisol levels in late pregnancy can predict the sleep of infants, according to a new study to be presented on Tuesday, June 6 at the [SLEEP 2023](#) annual meeting. This study is also published in *Sleep*.

Results show that newborns with higher levels of cortisol in their [hair samples](#) took longer to fall asleep at 7 months of age. Neonatal hair cortisol is a measure of fetal cortisol in the last trimester of pregnancy.

"Although increases in cortisol across pregnancy are normal and important for preparing the fetus for birth, our findings suggest that higher [cortisol levels](#) during [late pregnancy](#) could predict the infant having trouble falling asleep," said lead co-author Melissa Nevarez-Brewster, graduate student at the University of Denver. "We are excited to conduct future studies to better understand this link."

The researchers collected hair cortisol from 70 infants in the first days after birth; 57% of the infants were female. Parents then completed a sleep questionnaire when their child was 7 months old. Analyses co-varied for gestational age at birth and family income-to-needs ratios.

Tessa Benefield, lead co-author and research staff, noted that it will be important for future research to further study potential long-term effects of fetal cortisol production on sleep health through infancy into childhood.

"The results indicate that there may be prenatal influences on sleep health early in life, pointing to the need to better understand what factors may set the stage for better [sleep health](#) in infancy and beyond," she said.

More information: Tessa Benefield et al, 0121 Newborn Hair Cortisol and Sleep Health in Infancy, *SLEEP* (2023). [DOI: 10.1093/sleep/zsad077.0121](#)

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