

# Maternal depression and SRIs affect language development in babies

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Maternal depression and a common class of antidepressants can alter a crucial period of language development in babies, according to a new study by researchers at the University of British Columbia, Harvard University and the Child & Family Research Institute (CFRI) at BC Children's Hospital.

Published today in the *Proceedings of the National Academy of Sciences*, the study finds that treatment of [maternal depression](#) with serotonin reuptake inhibitors (SRIs) can accelerate [babies'](#) ability to attune to the sounds and sights of their native language, while maternal depression untreated by SRIs may prolong the period of tuning.

"This study is among the first to show how maternal depression and its treatment can change the timing of language development in babies," says Prof. Janet Werker of UBC's Dept. of Psychology, the study's senior author. "At this point, we do not know if accelerating or delaying these milestones in development has lasting consequences on later language acquisition, or if alternate developmental pathways exist. We aim to explore these and other important questions in future studies."

The study followed three groups of mothers – one being treated for depression with SRIs, one with depression not taking [antidepressants](#) and one with no symptoms of depression. By measuring changes in heart rate and eye movement to sounds and video images of native and non-native languages, the researchers calculated the language development of babies at three intervals, including six and 10 months of age. Researchers also

studied how the heart rates of unborn babies responded to languages at the age of 36 weeks in the uterus.

"The findings highlight the importance of environmental factors on infant development and put us in a better position to support not only optimal [language development](#) in children but also maternal well-being," says Werker, who adds that treatment of maternal depression is crucial. "We also hope to explore more classes of antidepressants to determine if they have similar or different impacts on early childhood development."

## Background

"These findings once again remind us that poor mental health during pregnancy is a major public health issue for mothers and their infants," says co-author Dr. Tim Oberlander, a professor of developmental pediatrics at UBC and CFRI. "Non-treatment is never an option. While some infants might be at risk, others may benefit from mother's treatment with an antidepressant during their pregnancy. At this stage we are just not sure why some but not all infants are affected in the same way. It is really important that pregnant women discuss all treatment options with their physicians or midwives."

Previous research by Werker has found that during the first months of life, babies rapidly attune to the language sounds they hear and the sights they see (movements in the face that accompany talking) of their native languages. After this foundational period of language recognition, babies begin focusing on acquiring their native tongues and effectively ignore other languages.

The current study suggests that this key developmental period – which typically ends between the ages of eight and nine months – can be accelerated or delayed, in some cases by several months. In another recent study, Werker has found that this development period lasts longer

for babies in bilingual households than in monolingual babies, particularly for the face recognition aspects of speech.

The maternal depression and language acquisition study was co-authored by UBC post-doctoral fellow Whitney Weikum at CFRI, Tim Oberlander of CFRI, UBC's Dept. of Pediatrics and BC Children's Hospital, and Takao Hensch, a professor of neurology at Harvard University.

Provided by University of British Columbia

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