

Study shows that premature infants benefit from adult talk

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Research led by a team at Women & Infants Hospital of Rhode Island and The Warren Alpert Medical School of Brown University has been published in the February 10, 2014 online edition of *Pediatrics*, the official journal of the American Academy of Pediatrics. The research indicates that premature babies benefit from being exposed to adult talk as early as possible.

The research, entitled "Adult Talk in the NICU ([neonatal intensive care unit](#)) with Preterm Infants and Developmental Outcomes," was led by Betty Vohr, MD, director of Women & Infants' Neonatal Follow-Up Program and professor of pediatrics, along with her colleagues Melinda Caskey, MD, neonatologist and assistant professor of pediatrics; Bonnie Stephens, MD, neonatologist, developmental and behavioral pediatrician, and assistant professor of pediatrics; and Richard Tucker, BA, senior research data analyst.

The goal of the study was to test the association of the amount of talking that a baby was exposed to at what would have been 32 and 36 weeks gestation if a baby had been born full term, using the Bayley Scales of Infant and Toddler Development, 3rd Edition (Bayley – III) cognitive and [language](#) scores. It was hypothesized that preterm infants exposed to higher word counts would have higher cognitive and language scores at seven and 18 months corrected age.

"Our earlier study identified that extremely premature infants vocalize (make sounds) eight weeks before their mother's due date and vocalize

more when their mothers are present in the NICU than when they are cared for by NICU staff," explained Dr. Vohr.

At 32 weeks and 36 weeks, staff recorded the NICU environment for 16 hours with a Language Environment Analysis (LENA) microprocessor. The adult word count, child vocalizations and "conversation turns" (words of mother or vocalizations of infant within five seconds) between mother and infant are recorded and analyzed by computer.

"The follow-up of these infants has revealed that the adult word count to which infants are exposed in the NICU at 32 and 36 weeks predicts their language and cognitive scores at 18 months. Every increase by 100 adult words per hour during the 32 week LENA recording was associated with a two point increase in the language score at 18 months," said Dr. Vohr.

The results showed the hypothesis to be true. Dr. Vohr concluded, "Our study demonstrates the powerful impact of parents visiting and talking to their infants in the NICU on their developmental outcomes. Historically, very premature [infants](#) are at increased risk of language delay. The study now identifies an easy to implement and cost effective intervention – come talk and sing to your baby – to improve outcomes."

Provided by Women & Infants Hospital

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