

700 Children's Drive  
Columbus, Ohio 43205-2696  
[nationwidechildrens.org](http://nationwidechildrens.org)

**NEWS RELEASE**

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Contact: Pam Barber/Mary Ellen Fiorino  
Nationwide Children's Hospital  
Marketing and Public Relations  
(614) 355-0495

**Study Finds Premature Infants Benefit from Diets Rich in Protein**

*Early amino acids in preterm infants associated with improved weight at discharge*

**(COLUMBUS, Ohio)** – More than 12 percent of babies are born prematurely, up more than 20 percent from 1990\*, and as premature birth rates continue to climb, neonatologists at Nationwide Children's Hospital are focusing their attention on the nutrition provided to premature infants during their first few days of life.

Preliminary findings of a newly concluded study out of Nationwide Children's Hospital found that preterm infants, when provided amino acids immediately after birth, showed significantly improved weight at discharge compared to preterm infants receiving amino acids later in their care.

One of the most common complications in premature infants is slow growth after delivery that has been attributed to lack of early nutrition support. Amino acids are the building blocks for protein, which is essential for growth.

“Many of our premature infants are born before the last trimester, when significant nutrition accumulation occurs, as well as a lot of growth,” said the study's lead author, Christina Valentine, MD, MS, RD, medical director for neonatal nutrition services at Nationwide Children's Hospital and a fellow at The Ohio State University Medical Center. “Our findings suggest that the first 24 hours of life is a crucial time for the administration of nutrition.”

The study was conducted in four neonatal intensive care units (NICU) contracted by Nationwide Children's Hospital in Columbus, Ohio and included 440 preterm infants born between 2004 and 2006, weighing less than 1500 grams at birth and surviving the first two weeks after delivery. Three hundred eight infants born in 2005 and 2006 were administered amino acids intravenously within the first 24 hours after delivery, and their results were compared with those of 132 preterm infants from 2004, who did not receive the early amino acid diet. Infants born in 2005 and 2006 weighed significantly more at discharge, with a mean weight of 2,342 grams, than those born in 2004, with a mean

weight of 2,242 grams – despite statistically smaller birth weights among those born in 2005 and 2006, as compared to 2004.

“Preterm infants often face acute diseases immediately upon entering the world, so in years past, their nutrition has typically gone on the back burner,” said Stephen Welty, MD, chief of neonatology at Nationwide Children’s Hospital and a faculty member at The Ohio State University College of Medicine. “The more we learn, the more we are realizing that nutrition should probably go on the front burner, because the evidence suggests nutrition may play a vital role in improving their overall health, even in the first few days of life.”

Neonatologists at Nationwide Children’s Hospital have developed a collaborative approach to providing early, aggressive nutrition for premature infants. The neonatal nutrition team, directed by Valentine, is comprised of neonatal dietitians, lactation consultants, peer counselors, pharmacists and a diet technician. The team assesses infants on an individual basis to determine their unique nutritional needs and prescribe individualized action plans, aimed at increasing weight and warding off diseases commonly associated with preterm birth.

*\*Births: Final Data for 2005*, National Vital Statistics Reports; vol 56 no 6. National Center for Health Statistics, Centers for Disease Control & Prevention. 2007.