

Studies find that delayed umbilical cord clamping may benefit some high-risk newborns

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Clamping and cutting of the umbilical cord happens within 10 seconds after birth in most cases, in part so members of a medical team can more quickly begin caring for a newborn. But research from Nationwide Children's Hospital shows that waiting 30 to 45 seconds to clamp could have advantages for extremely preterm infants.

The study, published online today in the *Journal of Perinatology*, found that the preterm infants with delayed cord clamping had higher [blood pressure readings](#) in the first 24 hours of life and needed fewer red blood cell transfusions in their first 28 days than infants whose umbilical cords were immediately clamped. In addition, the short delay made no difference in the safety of the infant immediately after delivery.

The study examined 40 infants who were born at a gestational age between 22 and 27 weeks. A baby is considered to be full term at 39 weeks; 22 weeks is the considered the limit of viability. The average birth weight of the babies studied was approximately 1.4 pounds.

"Infants born prior to 28 weeks gestation represent a high-risk subgroup, so efforts to improve

outcomes remain critically important," says Carl Backes, MD, a cardiologist and neonatologist at Nationwide Children's and lead author of the study. "There is increasing evidence that delayed cord clamping may give infants in many categories a better chance."

Dr. Backes also led a study, published in July in the *Journal of Perinatology*, which found delayed cord clamping may be beneficial for newborns with critical congenital heart disease. In that study, infants whose umbilical cords were clamped approximately two minutes after birth needed fewer [red blood cell](#) transfusions than infants whose cords were clamped within 10 seconds.

The delay allows for an increased blood volume in the baby, which likely improves [pulmonary blood flow](#) and other circulatory measures, stabilizing blood pressure. This may be particularly important for [infants](#) with critical [congenital heart disease](#), according to Dr. Backes, who is also an assistant professor of Pediatrics at The Ohio State University College of Medicine.

"Further research is needed in both of these infant populations to see whether the short-term benefits translate to reductions in long-term morbidity," Dr. Backes says. "The early results are promising, though."

Provided by Nationwide Children's Hospital

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