

Deferred umbilical cord clamping could save many premature infants

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Dr. Abhay Lodha, MD, neonatologist and associate professor in the departments of Paediatrics and Community Health Sciences at the Cumming School of Medicine and a member of the Alberta Children's Hospital Research Institute. Credit: University of Calgary

New research shows delayed umbilical cord clamping improves survival and reduces risk of brain injury in extremely premature infants.

A baby's [umbilical cord](#) is typically clamped and cut immediately after birth. Over the years, emerging research has suggested there may be benefits to delaying umbilical cord clamping in term neonates. However it was not clear if this intervention would also have benefits on the survival of extremely low gestational age preterm neonates.

In a new study published in *JAMA Network Open*, neonatologist Dr. Abhay Lodha, MD, and his research team found for the first time that delaying umbilical cord clamping in extremely preterm babies improves their survival. It also lowers the odds of severe neurological injury in the form of an intraventricular hemorrhage, or bleeding in the brain.

"Delaying cord clamping allows time for the baby's [blood pressure](#) to stabilize," says Lodha, associate professor in the departments of Paediatrics and Community Health Sciences at the Cumming School of Medicine and a member of the Alberta Children's Hospital Research Institute. "As premature babies' brain vessels are quite fragile, a rapid change in blood pressure can rupture their blood vessels, causing a brain hemorrhage."

In this [retrospective cohort study](#), researchers analyzed the outcomes of 4,680 neonates across Canada who were born at 22 to 28 weeks and were admitted to a neonatal intensive care units (NICU). The study suggests deferred umbilical cord clamping (DCC) leads to circulatory stability, which improves blood pressure and reduces the need for transfusions.

The researchers also found DCC reduced the risk of infection by allowing the newborn to receive more nutrient- and immune cell-rich [blood](#) from the mother.

"As long as the baby is stable at the time of birth, we recommend delaying umbilical cord clamping for 30 to 60 seconds," says Lodha. "This is a simple intervention that could reduce the need for medication to treat hypotension, reduce the risk of infections, and improves the baby's survival. We hope this new information will have a global impact, especially in developing countries, and save many premature neonates."

Going forward, the research team plans to study the long term neurodevelopmental outcomes of preterm neonates who received DCC at birth.

More information: Abhay Lodha et al. Association of Deferred vs Immediate Cord Clamping With Severe Neurological Injury and Survival in Extremely Low-Gestational-Age Neonates, *JAMA Network Open* (2019). [DOI: 10.1001/jamanetworkopen.2019.1286](#)

Provided by University of Calgary

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