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## Delay clamping umbilical cord reduces anemia risk: researchers

Added blood flow hikes iron levels

ANDRÉ PICARD  
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Waiting two minutes after birth before clamping the umbilical cord sharply reduces the risk of anemia in newborns and improves their iron status for up to six months, according to new Canadian research.

The simple measure, if implemented, could have a dramatic impact on the health of babies in the developing world, and also benefit newborns in technology-rich settings such as Canada.

"If you clamp quickly, you deprive the baby of blood," Eileen Hutton, assistant dean of midwifery at McMaster University in Hamilton, and lead author of the study, said in an interview.

"If you wait two minutes or so, blood flows in from the cord and the placenta and it provides the baby with good iron levels."

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While clamping and cutting of the umbilical cord at birth is the oldest and most common medical intervention in humans, there are no formal guidelines for physicians and midwives and practices vary widely around the world.

In countries such as Canada and the United States the cord is usually clamped within seconds of birth in the hospital setting.

The new study, published in today's edition of the Journal of the American Medical Association, suggests that approach benefits neither the baby nor the mother.

In fact, when clamping was delayed by at least two minutes, the risk of anemia fell by almost 50 per cent and the risk of low iron stores was reduced by one-third in the first months of life.

In the developing world, anemia is commonplace in infants, and the condition impairs growth and motor-neural development and makes them more susceptible to infection.

Don Davis, president of the Society of Obstetricians and Gynecologists of Canada, agreed and predicted that the findings will change practice. "When presented with convincing information like this, it behooves us to act," he said in an interview.

Dr. Davis said he had delivered two babies since reading the research and, in both cases, he waited a couple of minutes to clamp the cord. "Anything we can do to provide newborns with a benefit is a plus," he said.

The study is a systematic review, a compilation and analysis of previously published research. It involved a total of 1,912 newborns in 11 countries on five continents. In about half the births, the cord was clamped immediately after birth, while in the balance there was a delay of two to three minutes.

Before birth, fetal blood circulates through the umbilical cord and placenta. Delaying clamping allows blood in the placenta to flow through the cord to the baby, which increases blood volume by up to 30 per cent in newborns.

Kim Campbell, former president of the Canadian Association of Midwives and a lecturer in the division of midwifery of the faculty of medicine at the University of British Columbia, said the findings are important for parents everywhere.

"This news needs to be out there," she said, urging mothers-to-be to discuss the issue with their physician or midwife. She said that midwives routinely delay clamping and she was pleased to see that "what we thought intuitively has been shown to be beneficial . . ."

She said that things that need to be done immediately after birth such as ensuring the baby is breathing and delivering the placenta to reduce blood loss in the mother can all be done safely and swiftly without rushing to clamp and cut the umbilical cord.

The downside to delaying clamping is that it makes it more difficult to harvest cord blood. (Stem cells isolated from cord blood can be used to reconstitute patients' bone marrow to treat conditions such as leukemia.)