

## Cord Clamping - Please Wait!

<http://www.midwifeinfo.com/content/view/61/40/>

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"Immediate clamping of the umbilical cord can reduce the red blood cells an infant receives at birth by more than 50%, resulting in potential short-term and long-term neonatal problems." So concluded Judith Mercer, CNM and colleagues in a study reported in the fall of 2001 in the *Journal of Midwifery and Women's Health* (Mercer, 2001). "Early clamping of the umbilical cord at birth, a practice developed without adequate evidence, causes neonatal blood volume to vary 25% to 40%. Such a massive change occurs at no other time in one's life without serious consequences, even death. Early cord clamping may impede a successful transition and contribute to hypovolemic and hypoxic damage in vulnerable newborns" (Mercer, 2002).

A quick look at Varney's midwifery textbook says that the timing of cord clamping is "controversial;" Williams' obstetrics textbook notes that delayed clamping results in shifting an average of 80 ml. of blood from the placenta to the baby, increasing the iron stores and reducing the frequency of iron deficiency anemia later in infancy. Nonetheless, despite no evidence for the benefits of early cord clamping and overwhelming evidence that delayed clamping is beneficial, almost all obstetricians and many midwives just cannot wait to clamp and cut that cord. In a survey by Mercer of the habits of nurse-midwives, she found that about a quarter clamped before 1 minute after birth; slightly over a third clamped from 1 to 3 minutes; and a third clamped after pulsations cease (Mercer, 2000). The clamps and scissors are readied ahead of time and, as soon as the baby is out, before there is time to assess how he is doing or to hand him up to the arms of his waiting mother, the big, fat, living, pulsing cord is clamped in two places and severed between, often spraying blood from the force of the pulsations. In the interests of being family-friendly, the scissors are frequently handed to the dazed and wide-eyed father, who hasn't had time to take stock of the momentous event that has just occurred, nor to have a good look at his baby. "Here, dad, you want to cut the cord?"

Why this hurry? There seems to be a fear that something just terrible will happen if the baby is not separated immediately from his lifeblood, from the placental oxygen and nutrients that have nourished him for nine months. Or is it just a rush to get on with things, to get this case finished up and move on to the next one? Recently, an additional rationale for early clamping of the cord has been promoted - collecting that precious cord blood to be saved, either for use in this baby's later life, for another individual, or for research. By clamping umbilical cord blood at an early stage, researchers obtain "a greater number of CD34+ cells" (Pafumi et al.). But wait a minute! Those CD34+ cells belong to this infant! When they are "harvested" for another purpose, there is a great possibility that this

infant is being robbed of substances that he needs for normal growth and development. It makes intrinsic sense that, during the incredible transition from intrauterine to extrauterine life, while he is trying to take his first breaths and fill his lungs with air, the baby can benefit from the additional oxygen coming from the still-attached placenta.

On the website [Cord Clamping.com](http://CordClamping.com), there are suggestions that the practice of early cord clamping may have far-reaching detrimental effects on the infant, such as autism, infant anemia, childhood mental disorders and hypoxic ischemic brain damage. These hypotheses do not seem far-fetched, considering that the infant is being deprived of half of his blood supply. (See the web site for an explanation of the basics of the cord clamping /brain damage issue.)

In her study, Mercer reviewed cord clamping studies from 1980 to 2001. According to her results, "five hundred thirty-one term infants in the nine identified randomized and non-randomized studies experienced late clamping, ranging from 3 minutes to cessation of pulsations, without symptoms of polycythemia or significant hyperbilirubinemia. Higher red blood cell flow to vital organs in the first week was noted, and term infants had less anemia at 2 months and increased duration of early breastfeeding. In seven randomized trials of preterm infants, benefits associated with delayed clamping in these infants included higher hematocrit and hemoglobin levels, blood pressure, and blood volume, with better cardiopulmonary adaptation and fewer days of oxygen and ventilation and fewer transfusions needed. For both term and preterm infants, few, if any, risks were associated with delayed cord clamping." Mercer noted that longitudinal studies are needed to confirm the benefits of delayed cord clamping.

In one study of preterm infants in Louisiana, delayed cord clamping significantly reduced the requirement for blood and albumin transfusion. It also increased the initial hematocrit, red blood cell count, hemoglobin levels, and mean blood pressure (Ibrahim et al.). In another study of very premature babies delivered by cesarean section in Germany, cord clamping was delayed for 45 seconds. The researchers concluded that this practice "is feasible and safe in preterm infants below 33 weeks of gestation. It is possible to perform the procedure at caesarean section deliveries and it should be performed whenever possible. It reduces the need for packed red cell transfusions during the first 6 weeks of life" (Rabe et al.). Finally, in another study of babies born to anemic mothers in India, a randomized controlled trial, the risk for anemia at three months of age was almost eight times higher in the early compared to the delayed clamping group (Gupta et al.).

Waiting until the cord has stopped pulsing is such a simple thing. It requires no additional skills, knowledge, protocols, or investment in equipment or supplies. It has no social, political or economic ramifications; no one is opposing it. Only infrequently is a cord so short that the baby cannot be placed on his mother's breast with the cord intact, and in those instances a simple explanation about the importance of waiting will reassure the mother. If all of us - midwives, physicians,

nurses, doulas, families, and childbearing women - remember the importance of this simple act, and gently remind one another to wait before clamping the cord, we can optimize the chances for our babies to make a successful transition to extrauterine life, minimize newborn anemia, and perhaps prevent significant problems in later life.

## References

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