



Info-paper

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<http://americanpregnancy.org/labor-and-birth/delayed-cord-clamping-risks-benefits/>



Delayed Cord Clamping (DCC): What are the risks and benefits?

More mothers than ever before are inquiring about delayed cord clamping (DCC). This rise correlates with the World Health Organization's recommendation that the [umbilical cord](#) should not be clamped earlier than necessary.

Although there is much debate surrounding the optimal time to clamp the umbilical cord, WHO's findings suggest that late cord clamping (one to three minutes after delivery or longer) is recommended for all births.

However, most midwives advise a woman to wait until the cord quits pumping.

These findings also suggest that immediate cord clamping (ICC) isn't recommended unless the newborn is asphyxiated and needs immediate resuscitation. However, do the benefits of DCC outweigh the associated risks?

What Is Delayed Cord Clamping?

Delayed cord clamping is the prolongation of the time between the delivery of a newborn and the clamping of the umbilical cord.

Delayed umbilical cord clamping is usually performed 25 seconds to 5 minutes after giving birth. DCC allows more blood to transfer from the placenta to the baby, sometimes increasing the child's blood volume by up to a third.

The iron in the blood increases the newborn's iron storage, which is vital for healthy brain development.

Is Delayed Cord Clamping Common?

DCC is typically only used with [preterm infants](#), as babies born before full-term are said to benefit greatly from the extra blood received.

The American Congress of Obstetricians and Gynecologists (ACOG) endorses DCC in preterm infants but believes there isn't enough evidence at this time to confirm the potential benefits of delayed umbilical cord clamping in full-term babies.

The lack of research in the past has meant that for many years, standard care during the delivery of the placenta

has been to clamp the umbilical cord immediately after birth (10 – 30 seconds). ICC has also been the preferred option because it allows for the immediate transfer of the baby to the neonatologist. *(ROON&RICE: Convenience for care givers, yes, but not natural at all. The baby can be weighed later 30 minutes later, it will not meaningful affect the statistics)*

However, as suggested by Dr. Heike Rabe, a neonatologist specializing in related research in the UK: “There is growing evidence from a number of studies that all infants, those born at term and those born early, benefit from receiving extra blood from the placenta at birth.”

What Are The Benefits Of Delayed Cord Clamping?

Some new studies have found that DCC can have a positive effect on both preterm and full-term babies. These benefits include an increase in placental transfusion, a **60% increase of RBCs and a 30% increase in neonatal blood volume.**

Another advantage of DCC is the **decreased risk of iron deficiency anemia.** By performing DCC, an additional 40 to 50 mg/kg of iron transfers to the newborn, which **reduces the risk of the baby suffering from the severe side effects associated with iron deficiency.**

Common side effects of iron deficiency at birth include cognitive impairment and central nervous system problems.

Dr. Rabe believes there are other benefits:

“The extra blood at birth helps the baby to cope better with the transition from life in the womb, where everything is provided for them by the placenta and the mother, to the outside world. Their lungs get more blood so that the exchange of oxygen into the blood can take place smoothly.”

Do Delayed Cord Clamping Benefits Outweigh The Risks?

There are three areas of concern surrounding DCC. Infants associated with DCC are said to be at a greater risk of polycythemia, hyperbilirubinemia, and respiratory distress.

However, significant research does not support the risk of these conditions on babies receiving DCC.

Here is a breakdown of the concerns:

- **Hyperbilirubinemia**

Hyperbilirubinemia occurs when bilirubin levels build up too much in the blood. Bilirubin results from a breakdown of red blood cells. In the womb, the placenta takes care of the excess bilirubin, but after birth, the baby’s liver must process the bilirubin on its own. The build up of bilirubin often causes a yellowish tint to the eyes and skin, called jaundice. This is normal to some extent in newborns and often requires phototherapy to reduce it.

It is hypothesized that DCC babies will have a greater incidence of hyperbilirubinemia due to increased iron

stores. Consequently, there are concerns they will need phototherapy for [jaundice](#).

However, other reports have found there is no significant difference in mean serum bilirubin levels between ICC and DCC infants, meaning there is no increased risk of jaundice in DCC babies.

- **Polycythemia**

Polycythemia occurs when there is an excess of red blood cells in circulation. This can cause issues with breathing, circulation, and may lead to hyperbilirubinemia.

Another proposed risk is that when there is excess blood flow to the newborn, the development of blood hyperviscosity (increased thickness) should be a primary concern. It has also been theorized that DCC could put a newborn at increased risk for polycythemia.

However, a Cochrane meta-analysis found that DCC infants are not exposed to an increased risk of developing polycythemia. More research is needed to determine with certainty whether DCC has a hand in newborns developing polycythemia.

- **Respiratory distress**

Respiratory distress occurs when there is not enough of a liquid coating in the lungs (surfactant) after birth to keep the airways and tiny alveoli of the lungs open. This can cause a buildup of damaged cells near the lungs and a buildup of carbon dioxide in the blood. When this happens, babies often need to be placed on a ventilator.

It is suggested that the delayed absorption of lung fluid due to the increase in blood volume may cause transient tachypnea (rapid breathing). A Cochrane review found a

similar number of DCC and ICC infants were admitted with respiratory distress, which suggests **DCC babies are no more at risk than ICC infants.**

If an infant is in respiratory distress during delivery, DCC can delay resuscitation efforts. However, DCC will not be performed in these circumstances, and ICC will be adopted instead.

Are There Any Maternal Risks To Delayed Cord Clamping?

Concerns about DCC also surround the mother. It has been implied that DCC may lead to an increase in postpartum hemorrhage.

However, there is no statistical evidence proving that DCC results in an increase in blood loss. **There is also no significant difference regarding blood loss greater than 500ml between early and delayed cord clamping.**

Should I Add Delayed Cord Clamping To My Birth Plan?

Ultimately, as you have read, the benefits of DCC do outweigh the hypothesized risks. There is no evidence to suggest that full-term infants cannot gain the same benefits from delayed cord clamping as preterm babies.

A final study by The JAMA Network also suggested a couple more minutes attached to the umbilical cord can translate into a small boost in neurodevelopment.

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Compiled using information from the following sources:

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