

**Delayed Cord Clamping: Benefit Risk Analysis**

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## Abstract

**Recent research reveals that delayed cord clamping (DCC) has many benefits including: increased blood transfer-time from placenta to infant, higher blood oxygen saturation levels, and improves chances of successful neonatal resuscitation. In addition, delayed cord clamping does not increase the risk of jaundice.** The data is clear that delayed cord clamping has many benefits, and the benefits outweigh the risks. With increased blood transfusion time, the infant receives an additional 20-30% of their blood volume which is roughly 60ml's of blood, which results in higher oxygen saturation levels. When an infant has higher oxygen saturation levels shortly after birth a neonatal resuscitation is more likely going to be effective. In addition for many years the medical field taught that delayed cord clamping would increase hyperbilirubinemia numbers resulting in severe cases of jaundice, this however has shown to be inaccurate information.

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*Keywords: Delayed cord clamping, jaundice, neonatal resuscitation*

## **Delayed Cord Clamping: Benefit Risk Analysis**

Introduction: Abstract, thesis, introducing the benefits, with delayed cord clamping there is evidence that shows:

1. Increased blood transfer-time from placenta to infant (Mercer et al., 2017).
2. Higher blood oxygen saturation levels
3. Improves chances of successful neonatal resuscitation
4. Does not increase the risk of jaundice (McAdams, 2014).

### Paragraph #1: Blood transfusion

1. increased blood transfer-time from placenta to infant
2. importance of blood transfer-time from placenta to infant
3. concerns/risks of neglecting this additional time
4. “The amount of blood an infant obtains with placental transfusion is considerable. When cord clamping is delayed at birth or the umbilical cord is milked, infants obtain a placental transfusion resulting in approximately a 20 to 30% increase in blood volume and a 50% increase in red cell volume” (Mercer et al., 2017, P 261).

### Paragraph #2: Oxygen saturation levels with DCC

1. benefits of increased O2 saturation

2. contraindications to DCC i.e premature infants or infants with known CHD
3. impact on higher O2 saturation long term (Katheria, 2018)

Paragraph #3: Increased success of neonatal resuscitation success and Milking the Cord

1. In the third article it clearly supports that in the event of a resuscitation it is optimal and evidence-based that the cord remain intact for at least one minute. Salter (2014) acknowledges that it remains somewhat controversial among those in the birthing community, but she claims that the evidence to wait is overwhelming.
  - a. break down of success rates with and without DCC
  - b. logistical ways to perform neonatal resuscitation with cord intact
  - c. Studies that show positive outcomes keeping infant close to the birthing person
  - d. Milking the cord “These studies conclude in aggregate that cord milking significantly improves blood pressure, hematocrit, and hemoglobin levels within the first few days of life and iron stores out to 6 months of age. No associated harm was identified in any study” (Katheria, 2018, P. 6).
2. the next best option. Milking the cord in the event that DCC is not an option. This is going to be a very helpful systematic review for me to use because of the amount of professionals that have put their stamp of approval on the information, and statistics embedded have high CI (Ortiz-Esquinas et al., 2020).

Paragraph #4: Does not increase the risk of jaundice

“ failure to adopt DCC is unethical and will cause harm” (McAdam, 2014, P. 550).

1. breakdown of studies that show the increased risk of DCC and jaundice
  - a. This article is in favor of delayed cord clamping however, it does acknowledge that there are increased bilirubin levels for a baby that has had delayed cord clamping. This is a great article to weigh the true benefits and risks that are at hand, and to what extent (Yang et al., 2019, P. 207).
2. “hyperbilirubinemia and polycythemia are concerns that have hindered the adoption of delayed cord clamping (DCC) as routine care.” (Mercer et al., 2017)
3. At 24 to 48 hours, with no difference in bilirubin levels.” (Mercer et al., 2017)
4. Understanding connection to bilirubin levels and jaundice better

### Conclusion:

1. Bringing it all together
  - a. Reiteration of thesis
    1. Increased blood transfer-time from placenta to infant (Mercer et al., 2017)
    2. Higher blood oxygen saturation levels
    3. Improves chances of successful neonatal resuscitation
    4. Does not increase the risk of jaundice (McAdams, 2014)

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