

## **What Happens Physically, Psychologically and Emotionally at Birth**

### Third Stage:

1. Delayed cord clamping – rationale
  - The placenta and the cord are all part of the baby's body
  - All of the blood in the placenta and cord are the baby's blood
  - Babies need a full blood volume in order to clear lung fluids
  - Normal transfusion of blood is approx 100ml
  
2. During labor the placenta must stay attached to the uterine wall
  - Baby's blood backs up into the placenta (approx 66ml) – this keeps the placenta attached throughout labor(Dunn, P. 1966)
  - Hormone prolactin is released only after release of the placenta
  - Prolactin release is enabled by endorphins
  
3. Oxygen concentration in the blood
  - Premature babies have more respiratory distress, increase in infection and difficulty with temperature control due (in part) to lower blood volume and lower hemoglobin (red blood cell concentration) – premature babies are the most transfused population in modern medicine (60 percent to 80 percent of preterm infants less than 32 weeks' gestation) - Cochrane Collaboration Oct 2004
  - All babies are born with low oxygen levels (mild hypoxia)
  - Low levels of O<sub>2</sub> cause bradycardia – slowing of the heart; apnea – absence of breathing; and swallowing
  
4. Transition from fetus to newborn
  - Air on the baby's face changes the pH of the CSF – causing the shunts to close
  - Baby leaves the pelvis releasing pressure on the vessels of the cord – causing a large bolus of pH balanced, oxygen rich blood to be forced into the lung circulation
  - Capillary beds dilate and expand, pulling the alveoli erect
  - The fluid shifts from inside the alveoli to the capillary beds – being pushed out into circulatory system
  - 20% of the baby's blood volume comes from lung fluids
  - Baby needs at least 45ml of blood to dilate the capillary beds
  - 50% transfusion occurs 1-2 minutes after birth
  - 100% transfusion occurs 3 minutes after birth
  - If capillary beds are dilated and the alveoli is held erect, blood then goes to the gut and kidneys
  - Artery begins to close 45-60 seconds after birth
  - Artery closes closest to the placenta
  - Contractions causes more blood to pump into the baby
  - A big surge of blood comes with placenta separation
  - Vein stays open – more than twice the size of the artery – in case too much blood is pumped into baby – the excess can backwash into the placenta
  - True physiologic cord closure happens between 1.5-3 hours after birth
  - Oxytocin surge from mother occurs at the same time
  - Need for resuscitation much less when cord is intact

## 5. Resuscitation

- Take extra time
- Slow your pace - Babies integrate 6 times slower than adults
- Tell the baby what is going on
- Reassure baby that they are finished with the birth
- Tell them they, "Made it!"
- Differentiate – this is not your birth, another baby's birth, or your baby's birth
- Tell the baby what you want them to do
- Tell the baby the "story" of what happened – name how YOU felt, this causes differentiation. Naming how you felt helps the body be heard. When the body feels heard, the nervous system settles.

Telling the story must be done slowly (pacing) with pauses, eye contact and grounding, then reflecting back what you see in the reactions of the baby (following the baby's cues)

Grounding – Feel your feet on the floor – back on the chair – the weight of your body – Take a BREATH – feel your weight again. This brings you into the present and calms your autonomic nervous system

Pacing – SLOW DOWN – like the "children at play" sign on the road

Pausing – part of slowing down – pause frequently – create a sacred space in the room

Eye contact – helps slow the pace – makes a LOVE BUBBLE

Talking – Tell the baby what you are going to do before you do it and then again right before you do it – Tell the baby what is going on

Differentiation – the baby feels everything the mother feels – they are undifferentiated – telling them what YOU are feeling and it is not them helps them not take on YOUR feelings as their own. The entire world is the mother to the baby and by helping them differentiate you create healthy boundaries.

Rupture and Repair – It is not about you – this is differentiation – state things like, "I am sorry about what happened, you can relax," then say, "I love you." This is repair. Repair creates more attachment and trust than if the rupture had not happened. This can happen to anyone at any age!

Dan Siegel, MD – Parenting from the Inside Out

Karen Strange, CPM - Midwifery Management of Neonatal Resuscitation

Wendy A. McCarty, PhD – Being with Babies ([www.wonderousbeginnings.com](http://www.wonderousbeginnings.com))

Ray Castellino, DC – Womb Surround Process Workshop ([www.castellinotraining.com](http://www.castellinotraining.com))