



## The significance of normal vaginal birth

Birth is the natural conclusion to a pregnancy and the time when mom and dad are finally going to meet their baby. It is not as though mom and baby do not know each other; they have been living together in the most intimate way possible for more or less 40 weeks, communicating with each other daily – mom moving, touching, talking and thinking and baby kicking and turning, sometimes even sending a heartburn message. The communication between mom and baby is very important before mom can use her brain and the guidance of her birth educator to navigate birth the way nature designed it to be – normal vaginal birth.

Normal birth starts when baby plays an active role in his own birth by determining when it's the optimal time to be born – not too early while he still needs the comfort and care of the womb but also not too late when the placenta has started to become less sufficient. This process is started towards the end of the pregnancy when baby's heartbeat and stress hormone levels rise to increase the flow of blood to his heart, lungs and brain. The baby's brain reads the surge in stress hormones as the sign to initiate the onset of labour and in turn sends stress hormone signals to the placenta to produce enzymes to stimulate the production of oestrogen and decrease the production of progesterone. Both mom and baby find this phase exciting, challenging, stimulating and stressful.

<b>Oestrogen</b>	(with the help of other hormones) ripens the cervix, strengthens the contractions and prepares the receptors for the surge of oxytocin.
<b>Oxytocin</b>	helps to maintain contractions until the baby and placenta have been delivered. It also loads the breasts with colostrum (early milk) and warms mom's skin so she is a ready and available 'incubator'. Oxytocin is also called the love hormone or the hormone that promotes bonding.
<b>Progesterone</b>	plays a part in conception, implantation and the thickening of the womb lining – in other words, progesterone helps mom to hold onto baby, while oestrogen helps mom to let go of baby.

As labour progresses and the contractions become longer, stronger and closer together – mom is in pain and uncomfortable and baby is experiencing serious stress while the world (as baby knows it) is steadily being destroyed by contractions that:

- push him into a birth canal that moulds his skull
- deprive him of oxygen for short period of time
- squash his whole body through a hole that seems to be way too small and
- force him towards a bright light he has never seen before.

The words 'push, deprive, squash and force' conjure up a frightful picture to most parents. The brain's instinctive response to want to protect baby from such a frightful and stressful experience often influences her choice when considering birth options. What is important is that moms and dads realise that the stressful experience was designed to help mom to become alert and focused and prime the baby's sustaining systems to take over life support in the outside world.



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The catecholamine (stress hormones) adrenaline and noradrenalin are present during labour but have a different effect on mom and baby. Stress hormones get mom going by increasing her alertness and heart rate, and sending more blood to her muscles in readiness for the birthing process. Stress hormones have the opposite effect on baby during labour by decreasing his heart rate, slowing down breathing activities and even temporarily paralysing some muscles so baby doesn't resist the birthing process.

It is the natural but stressful experience of birth contractions itself that increase the levels of catecholamine. Birth stress is hugely beneficial for baby in the following ways:

- Baby undergoes intense skin and proprioceptive stimulation, which enables his protective tactile sense to go to rest so he seeks rather than rejects touch, latching and feeding once born
- He is also more geared towards feeding and tends to suckle with more ease primed by the rhythmic contractions around the crown of his head
- Contractions on the rest of baby's body act as a deep tissue massage and gives the development of his nervous system a boost
- An alert nervous system prompts three primitive reflexes into action to aid the birthing process, the TLR, ATNR and Spinal Galant reflexes, which also spurs the senses of hearing and sight on in readiness for life outside of the womb (See Newborn reflexes on page 4)
- Adaption to life outside the womb is much better

*It is very unlikely that natural selection would go through all the trouble of building our large sophisticated brains only to damage a large portion of them on the way out of the womb*

- Lise Eliot

## PRIMITIVE REFLEXES

### TLR (tonic labyrinthine reflex)

The function of TLR is to use head movement to straighten the body out into an upright posture. In doing so it develops head control, core muscles, shoulder and hip flexion to improve balance, muscle tone and proprioception.



TLR Forwards



TLR Backwards

### ATNR (asymmetrical tonic neck reflex)

The ATNR is an involuntary response to turn the head to the side, while automatically extending the arm and leg to the same side, with the other arm and leg flexed. This action develops differential movement on either side of the body. The ATNR also stimulates hip flexion, muscle tone, the vestibular system and vision.



### Spinal Galant reflex

When a baby is placed on its tummy and the area on the side of the bottom of the spine is stimulated, the baby would involuntarily turn its hip 45° towards the stimulation.



*Upright positioning and good breathing during labour greatly reduces the risk of impaired oxygen supply to the baby.*

- as can be seen from his reflexes, muscle tone and responses in the two days following his birth
- He is less likely to suffer from breathing problems because the stress hormones helped to absorb excess fluid in the lungs and release lung surfactant needed for gas exchange to make breathing easier
- Baby tends to take his first breath quicker
- Because the stress hormones speed up the metabolic rate, it enables him to maintain his body temperature
- His blood oxygen level rises more quickly after birth
- He is more alert and ready to bond with mom.

Babies born by C-section do not experience the same levels of catecholamine as babies born normally. Depending on mom's anaesthesia, C-section babies' catecholamine levels may be between two and 10 times lower, their initial responses slower and their suckling weaker.

Catecholamine levels in babies born by C-section after the spontaneous onset of labour are much closer to the levels of catecholamine in babies born normally.

Too much stress is not beneficial to either mom or baby and is one of the reasons why the relationship between mom and birth educator is crucial to make timeous and informed decisions.

Moms and dads need to be assured that research has proven time and time again that natural birth stress is beneficial for baby so he is prepared for and able to survive outside the womb.

### References

- De Jager, M. 2011. brain development MILESTONES and learning. Johannesburg: Mind Moves Institute
- De Jager, M. 2011. breinontwikkeling MYLPALÉ en leer. Johannesburg: Mind Moves Institute



## Sister's advice - Top Tips for parents

*It is a known fact that certain fragrances trigger certain memories. Thus, parents must focus on building memories for their children from a very young age:*

### • Newborn babies:

- Breastfeed your baby (every mother has a unique smell to her own breast milk and babies can identify their own mothers' breast milk from many other women's)
- Mothers AND fathers must do kangaroo care: the baby will smell each parent's unique fragrance, improving the bond between baby and parent.

### • Babies older than 3 months:

- Remember to have a comfort-blanket close to your baby's body when she's asleep. She will associate the texture and the fragrance of the comfort-blanket with sleeping.
- Best even: mothers must place the comfort-blanket inside her top in order to transfer her unique

fragrance to the blanket. Baby will love having it close to her as it will remind of her mommy.

- Massage your baby on a daily basis. Use a good quality first-cold pressed vegetable oil i.e. olive oil/ grape seed oil. A good quality mineral oil is also good enough to use.
- **Nine months and older:**
  - Mother's can place her own pillow in the baby's bed when the baby suddenly begins to have sleeping difficulties. The fragrance on the pillow will remind her of her mommy.
  - Add gentle bath oil in the bath water. This will not only moisturise baby's skin but also fragrance the bath water and air, making bath time a joyful time.