

Forum

Natural birth: improved outcomes for both mother and child

Lisa Muscarella, Kathy Blanco, and Donna Young

Abstract

This forum consists of three mothers who each candidly share their birthing experience and knowledge in the hopes of educating pregnant mothers and effecting sorely needed medical reforms. Lisa Muscarella discusses how proper birthing position can achieve as much as 30% greater opening of the birth canal, thus reducing the risk of shoulder dystocia, brachial plexus injuries, and other injuries to both mother and child. Kathy Blanco's personal experience and narrative demonstrates the positive birthing outcomes associated with natural birthing methods and contrasts these with a pregnancy where labor was induced using drugs, a pain killer was administered, and the umbilical cord was instantly clamped. Since 1998, Donna Young has been engaged in extensive research, and is most qualified to discuss fraudulent policies, procedures, and protocols that have become established for the benefit and convenience of the healthcare profession, rather than serve the interests of the mother and well-being of the baby.

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Keywords: natural birth, birthing position, immediate cord clamping, labor inducing drugs

Introduction

Childbirth experiences are not only individual, but can vary immensely from one pregnancy to the next. These birthing experiences are instructive and provide insight as to the standard of care that should be exercised by healthcare professionals and expected from birthing facilities. Truly informed consent is lacking when it comes to birthing procedures. Prenatal classes do not share the harm caused by birthing semi-sitting or flat on the back, the risk of drugs crossing the placenta, or informed choice of no umbilical cord clamping. Occasionally, one or more complications can arise during childbirth, for example placenta previa, necessitating medical interventions that may include a C-section to prevent the mother from bleeding to death or the child from being stillborn. All three mothers indicated that they would have certainly done things differently or chosen different options had they been truly informed. They have all learned from their past experiences which are not unlike many other mothers who were neither fully informed nor prepared for delivery. We hope this introductory Forum will encourage readers, both husbands and wives, to continue to do further research so as to have a positive birthing experience.

Current birthing position is challenged

The on-the-back (dorsal lithotomy) or semi-sitting (supine) delivery positions commonly used routinely today in the U.S. and Canada (and many other countries), actually close the birth canal by as much as 30% and place undue stress and pressure on both the mother and the child. Interestingly, due to their awareness of the motion of the bones of the pelvic girdle, physicians in Egypt avoid placing mothers in lithotomy. Instead, an on-the-side position or a position where the buttocks (and the patient) are forward and off the table, allows the coccyx to drop. This and other delivery positions (hands-and-knees, kneeling, standing, etc.) permit the birth canal to open by up to 30% more [1]. Studies have shown that continuing the routine use of the supine position during the second stage of labor is

unjustified and responsible for a higher rate of instrumental deliveries and episiotomies [2].

By placing women so they are lying on their backs or semi-sitting on their sacral tips, physicians are not allowing the tip of the sacrum to move backward, and are closing what would otherwise be available space for the baby to most safely pass through. As early as 1913 Emmons described a position that would allow the sacrum to move backward and thereby optimize the size of the birth canal during delivery. He wrote, "Moving backward of the tip of the sacrum...enlarges the available space not merely directly in proportion to the distance backward, but more nearly by the square of that distance [3]." By denying birthing mothers the movement of the sacral tip in the dorsal positions, physicians can resort to pulling when the babies get stuck. This force can potentially rip spinal nerves from the spinal cords, in some cases causing the infant paralysis or death.

Unfortunately, many physicians (especially in the U.S.) are incorrectly instructed that the "on-the-back or semi-sitting routine positions, including knees retracted," duplicate the natural squatting position of delivery. Only the natural squatting position takes full advantage of gravity and allows full opening of the birth canal.

Use of episiotomy procedure is challenged

There is no scientific evidence supporting the use of episiotomy as a beneficial surgical procedure in the majority of instances that physicians opt to perform it. It does not decrease the risks of severe perineal lacerations; it inhibits development of pelvic relaxation, and it has not impacted newborn mortality or morbidity. Improving the birthing position likely can help maintain the integrity of the perineum and avoid surgical procedures that should only be employed on a selective case-by-case basis [4].

Use of immediate cord clamping (ICC) is challenged

Another widely used routine procedure involves immediate or early cord clamping (ICC/ECC). A nine-pound [4.1 kg] new-

born has approximately 10 ounces (300 ml) of blood. Immediate clamping of the umbilical cord can reduce the red blood cells an infant receives at birth by more than 50%, resulting in anemia and other potential short- and long-term problems [5]. Delayed clamping has been shown to have many benefits, including higher hematocrit and hemoglobin levels, improved blood pressure and volume with better cardiopulmonary adaptation [6], less infant respiratory distress syndrome (IRDS) [7], and reduction of Hyaline Membrane Disease (HMD).

ICC interrupts the infusion of blood into the expanding lungs, damaging the lung sacs [8]. A recent study concludes that delayed cord-clamping in preterm infants is associated with reduced need for transfusion and less intraventricular hemorrhage [9]. ICC/ECC may be responsible for increases in brain damage and autism and such infants where these procedures are used may be more susceptible to adverse vaccine reactions [10].

Babies that have been quickly cord clamped are weaker than those where clamping has been delayed. If the newborn baby is not kept warmed and wrapped, hypothermia can occur, causing pulsation of the cord to cease unnaturally early. While scientific studies have shown that delaying cord clamping by only 30 seconds yields health benefits compared to ICC, all early clamping of the cord deprives the infant from the full health benefits that derive from letting all blood infuse.

Medical persons have long known the facts concerning improper handling of the umbilical cord and the injurious affects [11]. In 1801 Erasmus Darwin in *Zoonomia* (volume 3, page 302) writes, “Another thing very injurious to the child, is the tying and cutting of the navel string too soon; which should always be left till the child has not only repeatedly breathed but till all pulsation in the cord ceases. As otherwise the child is much weaker than it ought to be, a portion of the blood being left in the placenta, which ought to have been in the child.”

Interestingly, ICC became more widely used as medical institutions began harvesting placenta blood, including the cord, membrane, stem cells, and associated enzymes and hormones [12]. Contracts used by medical institutions that are signed by the mother (as patient) often indicate that the placenta will be “properly disposed.” This language has allowed for research use and third-party sales of the cord and placenta. The mother should designate that both cord and placenta are not to be used further by the medical institution or other third-parties.

Use of labor inducing drugs is challenged

Finally, labor inducing drugs such as Oxytocin, Toesen, Syntocinon, Pitocin have been shown to have a negative effect on the child’s developing brain. When these drugs are administered to the mother, since they can travel to the baby through the placenta, immediate cord clamping is necessary to prevent the baby from suffering brain damage; however, the clamping can cause the infant to experience anemia. Recent studies have called for a re-evaluation of routine use of these drugs due to their adverse effects on the newborn. Another drug, Demerol® (or Pethidine) has been found to have long-acting behavioral and neurological effects in newborns due to slow elimination. As a result, breastfeeding is delayed and the mother-infant interaction is disturbed [13].

Conclusion

In conclusion, it is imperative that doctors practicing obstetrics remember their number one ethical duty to “Do no harm.” Until such time as doctors adopt routine and standard protocols that keep the mother’s safety and the well-being of both mother and child as the top priority, it is recommended that the mother devise a Birth Contract/Waiver and have it witnessed. Signed by the doctor, it becomes a guiding medical directive superseding any policies that may have been adopted by the healthcare establishment to promote time efficiency or convenience of the doctor or medical staff.

Pregnant mothers must question the fraudulent policies, procedures and protocols that have often come to define current standards of practice and which have contributed to the U.S. ranking 28th below other nations in infant mortality rates. Healthier outcomes for both mother and child can and are being achieved when mothers are truly informed and discuss with their physician topics that include (1) birthing positions, (2) under what specific circumstances procedures such as episiotomy and C-section might be performed, (3) use of long-delayed or no cord clamping, (4) no use of oxytocic drugs to induce labor or other interventions without informed consent.

A hospital’s or doctor’s acceptance of the current standard policies, procedures and protocols, is not a guarantee that such interventions are scientifically or medically effective or safe. Physician’s training is often compromised by conflicts of interest with the pharmaceutical industry, hospital incentives for enrichment through sales of biological products (including placenta blood and other cord products), and other biases.

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Proper birthing position: reduces risk of shoulder dystocia and injury to the baby

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Abstract

Thousands and thousands of newborns are injured each year at birth, as was my son. When a baby's shoulder gets impacted in the birth canal, a medical provider can overreact and apply excessive traction to the baby's head and neck in an effort to dislodge the shoulder. This may cause severe nerve damage to the brachial plexus, resulting in paralysis of one or both arms and/or hands. After my son's injury, I was told that my pelvis was too small for my baby, which resulted in him getting stuck. I felt so very guilty and anatomically inept, since I believed that my pelvis was too small to safely birth my baby. Since my baby's injury, I have come to learn that it is not so much my anatomy that is in question, as it is the standard and routine practice of having women deliver on their backs. Women were not designed to give birth on their backs or semi-sitting. Such positions do not allow full sacro-iliac joint motion to occur and instead place most of the woman's body weight squarely on her tailbone, forcing it upward and restricting it from freely moving backwards. Scientific research supports the notion that such positions may actually close the mother's birthing canal by up to 30%, thus not allowing sufficient opening for the baby to safely pass through. If birthing mothers were not on their backs in the first place, there would be significantly less complications, less trauma and less injury to babies and mothers as well.

Keywords: brachial plexus injury, shoulder dystocia, birth positioning, birth trauma, birth injury prevention, birthing safety

Four years ago, my son sustained an injury at birth, known as a brachial plexus injury (BPI). He was a big baby, and during the time of delivery, after his head came out, his shoulder became stuck, a phenomenon known as shoulder dystocia. Shoulder dystocia can result in clavicle fractures, fracture of humerus, brachial plexus injuries, fetal hypoxia, with or without permanent neurological damage, or even death. Although shoulder dystocia is fairly common and something that all obstetrical health care professionals find worrisome, some physicians and medical staff are not adequately prepared or trained to handle it properly. Instead, some panic or overreact, applying unnecessary and excessive traction to the baby's head and neck in an effort to dislodge the baby. This is tragic because applying excessive traction to the baby's head is not one of the maneuvers designed to release the baby, actually it is clearly contraindicated, since pulling or turning the head can tear the nerves coming from the baby's spinal cord.

Immediately after my son's birth, his arm was completely limp, lifeless and paralyzed due to the severe damage of the nerves (the brachial plexus network of nerves) that come from the neck and down into the shoulder, arm, elbow, wrist and hand. Through endless hours of daily therapy over the years, and surgery, he has regained much function, but has many limitations, weakness, deformity of the shoulder joint, deformity of the elbow joint, along with many other lifelong issues. Any individual or family that has lived with this injury knows just how difficult and painful this journey is.

We were fortunate enough to have captured our son's birth on video, by our then 13-year-old daughter. Sadly though, the hospital banned video taping births shortly thereafter. To my dismay, I have learned that such banning has occurred at many hospitals across the U.S., despite possible censorship violations. I suspect our hospital banned video taping shortly after my son's birth because nothing has the potential to more clearly depict improper handling of a birth and provide documentation of what truly occurred during a

delivery, than live video footage which could potentially be used as evidence in a malpractice suit.

Without a video of the birth, it can be next to impossible to confirm what really transpired behind closed doors. I have been dumbfounded by the stories of families that were well aware that a shoulder dystocia and excessive traction occurred during the birth of their baby, yet upon receipt of their medical records, the occurrence of shoulder dystocia was not even noted. Concern of possible legal repercussions, causing a doctor to leave the incident undocumented, surely does not imply that shoulder dystocia did not occur.

Unfortunately, clear risk factors for shoulder dystocia are not always apparent and cannot be consistently used as a means of determining when a shoulder dystocia will occur, thus reminding us of the importance of taking a preventative stance and not using birthing positions that close the birth canal. Large infants are at higher risk for shoulder dystocia, but average weight infants may also suffer this complication. Additional possible risk factors may or may not include the following: prior birth with shoulder dystocia, prior macrosomia (large baby), pre-existing diabetes or gestational diabetes, obesity, advanced maternal age, excessive maternal weight gain during pregnancy, postdatism, prolonged second stage, protracted descent, abnormal first stage, and the need for mid-pelvic or assisted delivery.

Although extremely rare, this birth injury can occur with a cesarean section. Those of us in the brachial plexus injury community are well aware of, or personally know, mothers who were given cesarean sections with very small incisions. This can unfortunately result in doctors tugging too hard and in an inappropriate manner on babies, while attempting to pull them out through the tight incision, thus potentially resulting in a BPI. Some scientific literature states that these injuries can be caused by strong contraction in utero; however, in general, there appears to be more reliable evidence that contradicts such reports than supports them.

Recoveries from this birth injury vary from child to child. Some children have complete recovery in time, some have partial recovery, and some have limited, if any, recovery. Brachial plexus injuries are known to be one of the most complex injuries that exist

(next to spinal cord injuries) and they are often misunderstood, especially in terms of treatment and the long-term implications, which are numerous.

Brachial plexus injuries, also known as Erb's Palsy and Klumpke's, occur much more frequently than people realize. This injury affects approximately 10,000 to 12,000 babies each year in the United States, which translates into the statistic that more than 1 baby is being injured (usually needlessly) with every passing hour of every day. Brachial plexus injuries are one of the most litigated, if not *the* most litigated of all birth injuries. They occur in an estimated 2 to 4 per 1,000 births. More newborns suffer birth-related brachial plexus injuries than Down's syndrome, Muscular Dystrophy and Spina Bifida. This birth injury also occurs as frequently as Cerebral Palsy, yet it is often swept under the rug, and not even mentioned in many prenatal books. Why?

The answer to this question may include a variety of factors. Perhaps it is because the medical field continually minimizes the injury and does not acknowledge the possible lifelong implications. Sadly, many mothers are sent home from the hospital with their baby's paralyzed arm pinned to their shirt, with little or no information, and are told by the physician, "Your baby should be fine in a day or two." Perhaps this injury is swept under the rug because it is caused by the very hands of the doctors and midwives who have unnecessarily injured our babies. Perhaps it is because traditional hospital birthing positions often keep birthing mothers on their back or semi-reclined, needlessly closing birth canals by up to 30% when trying to push a baby out.

Through research, attending conferences, and by talking to as many people as possible, both mothers and professionals, I have come to learn that birth positioning can be of paramount importance when it comes to preventing various complications and injuries to both mother and baby. Birthing on one's back can lead to closing the birthing canal, compressing major blood vessels, interference with circulation and decreasing blood pressure, which in turn lowers the oxygen supply to the fetus. Humphrey et al. (1977) and Kurz et al. (1982) provide evidence that suggest if the mother lies on her back it can lead to reduced placental perfusion, diminished fetal oxygenation and reduced efficiency of uterine contractions. J. Roberts (1980) compared different studies on maternal positions and found infants birthed in the lithotomy position had higher acid levels. In addition she also noted, "fetal hypoxia and bradycardia have been associated with the supine position." Such positions can clearly put unnecessary stress on the baby.

Pushing in a supine position can be more difficult for mothers because they are now having to work and push against gravity as opposed to with it. This can directly increase the need for forceps or vacuum extraction, which in turn increases the risk of physical injury and damage to the mother and baby. Mothers report back pain is worse when birthing on their back and some even experience broken coccyx bones. There is also increased tension on the pelvic floor. In addition, such positioning can lead to less regular, and weaker contractions, which can result in a failure to progress, a cesarean section or an assumed need for pitocin, which may be the beginning of a potentially harmful cascade of interventions. On-the-back positions also increase the likelihood of having an episiotomy, and due to excessive stretching of the perineal tissue in such positions, mothers are much more likely to suffer from severe tearing of these tissues.

It is evident that women should not birth on their backs in commonly used positions such as dorsal lithotomy or semi-reclined, which force the sacrum upward and restrict it from freely moving backward as the baby passes through. Scientific research (Russell JGB 1969) supports the notion that such positions may actually close the mothers birthing canal by up to 30%, thus not allowing enough room for the baby to safely pass through. In 1911 Whitridge Williams, original author of *Williams Obstetrics*, clinically demonstrated 4 cm of sacroiliac motion.

Physicians and medical staff should always take a preventative stance by not having women birth on their backs in the first place. By accepting change in traditional positioning used in hospitals, and by accepting some minor inconveniences to themselves, medical providers can provide a safer delivery for the baby and mother, with less complications and less risk of injury. The priority should *always* be the safety and well-being of the mother and baby.

Many shoulder dystocias would be prevented by proper biomechanical positioning, which would allow the birth canal to fully open. If the baby's shoulder gets stuck, the mother should be repositioned immediately to get her off her sacrum, and practitioners should wait calmly for the assistance of the next contraction. Mothers should *not* birth on their backs, nor should medical professionals be allowed to promote birthing positions that can significantly close the birthing canal and potentially harm the mother and baby. If for some unfortunate reason a woman is on her back, she can easily be rolled off her sacrum onto her side. Supporting the woman onto hands and knees, upright or squatting position can help tremendously in preventing or alleviating shoulder dystocia by allowing the sacrum to freely move back as the baby is trying to pass through. Such positions also work with the benefits of gravity to assist in expelling the baby, and provide the baby with an easier and more effective position and angle for delivery.

Dr. William Sears states, "the best birthing position used by mothers the world over is squatting." He goes on to share that squatting speeds the progress of labor, widens pelvic openings, relaxes perineal muscles so there is less tearing, relieves back pain, improves oxygen supply to baby, and facilitates delivery of the placenta. Many women have been supported into hands and knees position, squatting, etc., even with epidurals, and side-lying can be accomplished with the greatest of ease for those who have anesthesia.

Physicians are often taught to apply "gentle" traction during a shoulder dystocia. This is truly a dangerous practice that needs to become obsolete. Medical providers would be wise to leave their hands off of babies' heads at the time of delivery, especially during a shoulder dystocia. Any recommendation of applying any amount of "gentle" traction during a shoulder dystocia appears to be a possible prescription for injury, and the only individual who can truly define what constitutes "gentle", is the baby—not a panicked or stressed doctor who can unintentionally apply too much of his or her adult strength, and end up trying to pull or twist a baby out of its mother. By getting mothers off their backs and avoiding the dangerous protocol of applying so-called "gentle" traction to the baby's head, brachial plexus injuries would immediately almost cease to exist.

Additional documented interventions designed to resolve a shoulder dystocia include such maneuvers as the McRobert's, suprapubic pressure, deliberate fracture of the clavicle, delivery of posterior shoulder, Zavanelli, Woods' or Rubin's maneuver. However, the effectiveness of some of these maneuvers appear to remain somewhat questionable. And whether or not the McRoberts, depending on the how it is performed, actually opens or closes the pelvis, is yet to be adequately determined. Interestingly, the Merck Manual, 7th Edition states, "When shoulder dystocia occurs, all available personnel should be summoned to the room, then the mother's thighs are hyperflexed to increase the diameter of the pelvic outlet." One cannot help but question the logic of the McRoberts maneuver (sharply hyperflexing the mothers thighs upon her abdomen), as an attempt to provide more space for the baby that should have been provided initially. Intervening to get a baby unstuck makes little sense in comparison to allowing the birth canal to fully open, providing the optimal and maximum space, and preventing harm to a baby in the first place.

Another maneuver used to resolve shoulder dystocia is called the Gaskin maneuver and is named after renowned midwife Ina May Gaskin. This maneuver moves the mother on to all fours (hands and knees). Ina May stated, "Once we adopted the use of the all-fours maneuver, there were no injuries to any of our shoulder dystocia babies." It is shared that the all fours (hands and knees) maneuver "always works" and is "superior" to other maneuvers traditionally taught. The success of this maneuver is truly wonderful, however, it still would appear safest to allow the baby the maximum space for passage prior to the baby getting stuck and trying to resolve it at that point.

Biomechanically, women were not designed to give birth on their back; therefore, it is evident that we should begin by working *with* physiology and biomechanics rather than working *against* them. Past president of the International Federation of Obstetrics and Gynecologists, Dr. Roberto Caldeyro-Barcia explicitly states, "Except for being hanged by the feet, the supine position is the worst conceivable position for labor and delivery." Renowned expert and author, Dr. William Sears, who trained at Harvard Medical School's Children's Hospital states these five reasons not to birth on your back in *The Birth Book: Everything You Need to Know to Have a Safe and Satisfying Birth*: (1) It will hurt mother. (2) It can harm baby. (3) It slows labor. (4) Episiotomy or tears are more likely. And in a pure and intriguing expression of honesty he bluntly states the fifth reason - (5) **It makes no sense.**

Such birthing positions do not allow full sacroiliac joint motion to occur and place most of the woman's body weight squarely on her tailbone, forcing it upward and restricting it from freely moving backwards as the baby is trying to pass through. Recognized pioneer of natural childbirth, Janet Balaskas shares, "In the semi-reclining position the sacrum is immobile and the pelvic outlet narrows...when the mother squats, the sacrum is free to move... The acrococcygeal joint, the joint between the sacrum and the coccyx or tailbone, also softens in pregnancy; it is designed to swivel backwards to widen the outlet of the pelvis as the baby emerges. Of course, this is impossible if the mother is sitting on her coccyx." If birthing mothers were not put on their backs (semi-sitting or dorsal lithotomy positions) in the first place, there would be significantly less babies getting stuck, less trauma, and less injuries to babies and mothers as well.

Having your precious baby injured for life, before he or she is even born, is truly heartbreaking. But having your baby endure an **unnecessary** and **preventable** lifelong birth injury is a true travesty, and enough to make any parent grieve perpetually. This injury requires relentless effort and commitment on the family's part. Battles with insurance, fighting for needed services, enduring a stressful litigation process, hours of daily home therapy performed by mom and dad, emotional stress, financial stress, relationship stress, multiple weekly therapy appointments outside of home, appointments across the nation to see BPI specialists, surgeries, etc.

For individuals and families dealing with this injury, support, accurate information and timely referrals to specialists are all crucial. I currently serve on the board of directors for the United Brachial Plexus Network (www.ubpn.org). The United Brachial Plexus Network (UBPN) is a registered non-profit organization devoted to providing information, support and leadership for families and those concerned with brachial plexus injuries worldwide. I am also the President of In-Reach, Arizona's brachial plexus injury support network, which is composed of children and adults who have sustained brachial plexus injuries. In addition, some of us mothers and fathers with children needlessly injured for life at birth aspire to come together to do something about all these preventable travesties, especially those related to potentially unsafe routine protocols, such as on-the-back positioning and immediate/early umbilical cord clamping, which my son also endured without my understanding of the possible harmful implications. We are hoping to be joined and supported by various courageous professionals who are committed to ethics and care enough to make a difference for mothers and babies.

It is imperative that all expectant parents inform themselves regarding safe birthing and how to prevent unnecessary injury to the baby, and to the mother's body as well. A great book regarding positioning is *Sit Up and Take Notice! Positioning Yourself for a Better Birth* by Pauline Scott. I regret everyday that I was not better informed. I now know there is no medically sound reason to give birth on your back, and there is every sound reason to give birth in a safer position that works with female anatomy and physiology, and does not restrict the pelvic outlet. Had my medical provider or I been educated and informed about the biomechanics of the female pelvis during birth, my precious child could have been spared from an unnecessary lifelong injury. I would have worked *with* physiology instead of against it, and by no means would I have ever risked closing my birth canal by up to 30%.

As a mother, you do everything in your power to protect that little miracle growing inside of you for nine months. It is truly devastating when the health of your baby is taken away, when you as a mother could have done so much to protect that baby and ensure his or her safety during delivery. It just hurts so deeply. Had I known what I now know, I could have also spared our family of the stress, grief and heartache that this injury has brought to all of our lives.

In conclusion, I must express that the practice of obstetrics can potentially be nothing shy of miraculous. There are many, many wonderful medical providers out there, and the field of obstetrics certainly has its value, and for that we should be grateful. However, medical providers must recognize when particular protocols are not in the best interest of mothers and babies, and they must be courageous enough to change them accordingly. It is imperative that medical professionals be willing to objectively challenge the deeply engrained belief systems that the medical establishment has perpetually imposed upon them.

If there is one thing that we should all agree on, it should be that there is NOTHING more precious in this world than a newborn baby, and there is NOTHING more important than the safety and health of that baby. Physiological and biomechanical facts of birth do not cease to exist just because physicians and medical staff, or their teaching institutions, choose to ignore them. When acknowledging the clear discrepancy that exists between some traditional delivery practices and scientific fact, in addition to the professional and ethical obligation to first and foremost “do no harm”, wouldn’t it behoove the medical community to embrace new position protocols for the safety of the mother and baby?

Figure 1. Two-year-old Tanner wears a cast for 5 weeks following muscle/shoulder capsule surgery. Due to deformity of the shoulder joint and internal rotational contractures, the cast was positioned in an externally rotated position so muscles heal in a lengthened position and humeral head would be properly positioned in the shoulder joint.



Figure 2. After the cast was removed, Tanner wore this splint for 8-weeks making sleeping most difficult and uncomfortable.



Thankfully, (as Don Ford once said) “truth is a child of time.” For the sake of our children and the precious lives that are at stake, isn’t NOW the TIME to acknowledge the truth that traditional hospital birthing positions are disadvantageous to both mother and baby, and are potentially quite harmful and injurious? Physiologically effective and safe positions that fully open the birth canal and utilize the important benefits of gravity, not only contribute to lower risk of shoulder dystocia and brachial plexus injuries, but reduce the potential for other injuries and complications as well.

Figure 3. Shown here is a “Dynosplint”, or dynamic/tension splint, which applies pressure and stretching to Tanner’s arm all night to help with his elbow/bicep contracture. His arm is permanently bent/locked at about 25° or so. Tanner will continue to use the splint until around 18 years old (when he stops growing). Without the splint, his contracture will worsen and he will lose more range of motion. The other night Tanner started sobbing in bed and his mother asked, “What is wrong?” Tanner replied, “This splint doesn’t help me cuddle with my teddy bear.” Tanner was not the only one in tears that night.



Figure 4. Tanner is shown during a 20-minute electrical stimulation treatment, administered 3 times a day, everyday, from the time he was 5-months-old. For the past year and a half he now wears a different unit at night underneath the Dynosplint—of course, if he does not tear it off!

