What's Posture Got To Do With It?

Q & A from Sandy Conner, PT, and Sandra Carroll, OTR, CIMI

Hip Dysplagia: Answers from Sandy Conner

Q: Kathy Foley from Sacramento: How many degrees of abduction is optimal during swaddling?.

A: Approx 20 degrees of abduction (from midline) would be the natural amount of abduction to place the hips in.

Q: Sandy: Regarding hip positioning, I had previously learned that positioning out of the "frog-legged" position was desireable. having just listened to your presentation, I am rethinking this. Am I correct in understanding that slight hip abduction and flexion is desirable?.

A: It is correct that for preemies, you want to position them out of (or NOT in) the frog-leg position. We still want to maintain hip flexion with slight abduction (naturally about 20 degrees of abduction from midline) when positioning /swaddling preemies as well as full term babies. It is only if a baby is diagnosed with hip dysplasia, depending on the severity and the physician, that the baby may be put in the Pavlik Harness that does place them in quite a bit more abduction (like the frog position). About 88% of babies with potential hip dysplasia reduce on their own with just diapering within 2 months.

Q: Irene Hurst from Monterey, CA: Thank you for the excellent presentation. How to do you suggest supporting optimal positioning when the baby is receiving phototherapy? The Dandle Lion products are great but not all units are able to purchase them.

A: I would still try to maintain flexion of the lower extremities using rolls/nesting . Some of our nurses starting using the bili mask to wrap around the baby's arms like a cape and fastening it in front with their arms flexed/hands toward face (to mimic the wings of the Dandle ROO). We use the Dandle ROO and just fold the pouch part down so their feet are covered in a pouch like fashion, maintaining hip and knee flexion.

Sidelying Feeding / Sandra:

Q: Pamela Bedford from Elliot Hospital, Manchester NH: would you speak to the drooling or squirting of milk out the sides of the mouth and how chin support may not be what the baby needs, typically it is a flow issue - too fast of a flow.

A: When there is drooling or squirting of milk out of the sides of the mouth, it is usually due to the flow being too fast. The infant is not able to manage the bolus when it is entering the oropharynx, so there will be anterior loss. The first intervention to try BEFORE chin or cheek support should be placing the infant in side-lying with the same nipple. If that nipple continues to be too fast, then try a slower flow. By providing chin/cheek support when it is really a flow issue, you can put the infant at risk for aspiration which could develop into later feeding aversions, due to the fact that the infant has been essentially "force fed".

Q: Yitka Ivanovic from Florida: Excellent! Can you give again an explanation for positioning babies with reflux at 60 degrees?

A: When the infant is placed in 60 degree hip flexion, there is pressure on the lower abdomen and a "compacting" of the internal organs, which places pressure on the stomach, possibly leading to pressure on the LES and causing gastric contents to be pushed up into the esophagus. The position of 60 degrees is the most common feeding position of infants in the NICU, and is also the position that the infant is in when he/she is in an infant carrier/car seat/bouncy seat.

Questions: Jodie Storhaug from Grand Forks, North Dakota: Sandra, it appears that the amount of head elevation in side-lying is really not more than about 30 degrees... would you say that is correct?
Kathy Foley from Sacramento: When managing the head in MSL, is the head resting in your open palm or gripping the neck (John Chappell calls this the Vulcan grip and doesn't recommend this support)? Also, what is your hand position for holding infant's head in MSL? Thank you for a great webinar.

A: This answer is for the previous 3 questions: Head elevation in ESL and MSL should be no more than 30 degrees – the head should be above the feet. The supporting hand is holding the back of the head in the palm, and the forearm of the same arm is supporting the trunk in a nice elongated position. Definitely avoid the "Vulcan" grip – it tends to stretch the neck up and away from the shoulder girdle, which is the position that we want to avoid in premature infants, and infants with hypotonia. This position of an elongated neck will actually make swallowing more difficult.

Multiple Questions around the same topic:
Debbie Walls: What happens to eye to eye contact during feedings for bonding and attachment?
Lisa Leamon from Hamilton Medical Center: What about the en face positioning? The ESL position does not promote the en face for the parents.
Mary-Elizabeth Ratzan from UAMC: I love side-lying. Why would you not want the baby to be facing the parent in a more natural social context? The parent can maintain a low level of stimulation to not overwhelm baby.
Pamela Bedford from Elliot Hospital, Manchester NH: Is there a time or gestational age that it is more appropriate developmentally to return to a cradle position for face to face interaction that is also important for infants.
Teresa Mingrone from Pittsburgh PA: At what age do you transition from this technique? Do you recommend using this technique for all NICU infants?

A: This answer is for the previous 6 questions: I do recommend this position for most NICU infants, especially younger infants with less neurobehavioral and neuromotor maturity. Most of these infants will be still learning to manage bolus control while they are in our care – trying to master the complex task of suck/swallow/breathe. If you are using the Synactive Theory of Development (Dr. Heidelise Als) as a theory base, it will help you to determine if the infant is showing signs of stability or stress in the Attention/Interaction subsystem. Again, most of our infants in the NICU will not be showing stability in this subsystem. So by avoiding the en face position (during the actual feeding with the infant taking a bolus), we can help the infant to organize his/her State, Motor and Autonomic subsystems. The bonding can be facilitated in these infants through Kangaroo Care, Massage, or just general holding. Once the infant exhibits neurobehavioral maturity in all subsystems, AND can manage the bolus, then that would be the time to transition to the cradle/ en face position. I also recommend that one continue to use what works best for the baby (from a safety nurturing perspective), even if it continues to be side-lying when the infant is ready for discharge. I have found that once the infant is nearing discharge (even on the day of discharge), that there is a big rush to get the baby to feed in the upright cradled position. Keep in mind that feeding is a developmental milestone and cannot be rushed, so if side-lying is what works best, then that is what should continue to happen. In most cases, the infant will eventually become mature enough to be fed in any position.

Questions: Melody Smith from Houston: What is the most optimal sleep position for GER babies?
Shelley Perkins from PA: is it better for babies to with reflux to be positioned supine flat after feed or with the head of the bed elevated.
A: This answer is for the previous 2 questions: I am going to refer you and your medical team to this article. I think that this is something that there is very much controversy over and will need to be directed by your neonatologist. Article:

Journal of Pediatric Gastroenterology & Nutrition: October 2009 - Volume 49 - Issue 4 - p 498-547. doi:10.1097/MPG.0b013e3181b7f563. Clinical Practice Guideline: Pediatric Gastroesophageal Reflux Clinical Practice Guidelines: Joint Recommendations of the North American Society for Pediatric Gastroenterology, Hepatology, and Nutrition (NASPGHAN) and the European Society for Pediatric Gastroenterology, Hepatology, and Nutrition (ESPGHAN). Vandenplas, Yvan[*]; Rudolph, Colin D[†]; Committee Members:; Di Lorenzo, Carlo[‡]; Hassall, Eric[§]; Liptak, Gregory[||]; Mazur, Lynnette[¶]; Sondheimer, Judith[#]; Staiano, Annamaria[**]; Thomson, Michael[††]; Veereman-Wauters, Gigi[‡‡]; Wenzl, Tobias G[§§]

Q: Marguerite Smith from Boca Raton, Fl.: How does one get seasoned NICU nurses to buy into this?.

A: Of course education and research are always the first answer. However, I believe that if you can show the nurses / therapists different babies feeding in the traditional position, then show them in side-lying (same nipple, etc.), then they will usually see a difference – for the better. And who can argue with that?

Questions: Yitka Ivanovic from FL: Can you give me a name or title of research paper for this so I can show this is evidenced based in my unit?.
Karen from FL: Can you email some evidence based research to me directly that may be able to change practice in my unit?
A: This answer is for the previous 2 questions: Clark, L., Kennedy, G., Pring, T., Hird, M. (2007) Improving bottle feeding in preterm infants: Investigating the elevated side-lying position. *Infant* 3(4): 154-58. Ludwig, S.M., Waitzman, K.A. (2007) Changing feeding documentation to reflect infant-driven feeding practice*. Newborn and infant nursing reviews*. Vol 7, issue 3. 155-160.

Q: Heather Batman from Memorial Hermann: Do you use the Infant Positioning Assessment Tool to give an objective score and monitor appropriate positioning in the NICU if so do you notice a difference in promoting optimal positioning and staff carry over.

A: Although I am familiar with the IPAT, we do not use that tool at our hospital. I definitely recommend trying it, if it works for you, your staff and your unit.

Q: Jill Steinmetz from St. Luke's Children's Hospital: Is left side-lying feeding better than right? Should we be trying both sides for improved tolerance? What about post-op babies with lines?

A: I think that trying both would be fine, however, it will usually default to the hand dominance of the feeder. An infant with lines can definitely be fed in side-lying, as long as regular precautions are followed, and care is taken to avoid any discomfort of the baby.

Q: Kathi Randall from Riverside County MC: Could you share the use of ESL for full-term infants with hypotonia (like a baby with Downs Syndrome)....any precautions for this population.

A: ESL would be a great position of choice to feed babies with hypotonia or Down Syndrome. The supporting hand of the feeder can provide graded postural support of the trunk, as well as provide a protective alignment and support for the cervical spine. Infants with Down syndrome are prone to cervical spine subluxations, which can lead to spinal cord damage. And if a pillow is being used, there is additional support to the trunk/spine. So, in my opinion, it could possibly be a superior position in which to feed.

Q: Pamela Bedford from Elliot Hospital, Manchester NH: it is my understanding that kids who have had PDA ligation, the right side vocal cord is at risk for paralysis and using the side lying position with the right side upward, it may help with feeding performance and keeping airway protected..

A: I feel that trying both sides and performing a thorough clinical bedside feeding & swallowing evaluation would definitely be warranted if you suspect vocal cord paralysis.

Q: Yitka Ivanovic from FL: I was wondering if there is a webinar on IUGR and how to treat these babies. I find they are not treated for their age but their size. Thanks.

A: I think that using the theory base of the Synactive Theory of Development would be the best way to care for these infants, from a developmental standpoint.

General Comments:

Karen from FL: I am the only RN, BSN that feeds in this manner in my NICU and am always asked why. When I explain the reasoning, I do not see an increase in nurses promoting this type of developmental care......Thank you for making the statement about the neuronal development and making this a safe comforting behavior, not a force feeding!.

Jodie L Storhaug from Grand Forks, North Dakota: I recently attended the 3 day workshop in San Fran on feeding and have changed to side-lying positioning and have found the babies to tolerate this better. I will be referring our other OT's (I am an OT) and our nurses to go back and see this webinar. Very well explained and presented. Thank you so much. I love this format for learning!

Melody Smith from Houston: Here at our hospital we have a higher incidence of L VF paralysis and feed in L side lying to allow for the R VF to move past midline and also do MBSS in L side-lying which shows this is a successful strategy for airway protection.

Melody Smith from Houston: At Woman's Hospital we have tilted the table in radiology to actually view the baby feeding in Left side-lying with great success.