

Development of an Integrative Relationship in the Care of the Breastfeeding Newborn: Lactation Consultant and Chiropractor

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ABSTRACT

As physiologically normal birth has yielded to medicalization, the hormonal milieu that directs establishment of breastfeeding is compromised and lactation consultants are confronted with increasing numbers of infants whose innate competency is threatened. The compromised infant reorganizes, rapidly adapting his behaviors to ensure his survival. Compensatory behaviors may or may not facilitate feeding, and may force the infant to rely upon others to accomplish feeding. Interventions that support the infant threaten his competency at breast and risk his ability to direct his relational world, which is the foundation of his developmental success. Often compensatory behaviors lead to premature weaning, as they can be inefficient and physically and emotionally injurious to the mother, thus hope of reclamation becomes less certain. Chiropractic intervention, when applied skillfully and in collaboration with the lactation consultant can support full competency in feeding and offer the infant the opportunity to reclaim his full human potential.

Key Words: breastfeeding, competency, compensation, “sensitive period”, chiropractic, lactation consultant, perinatal, collaboration, integration

INTRODUCTION

There is a growing consensus among psychologists, midwives, lactation consultants, physicians and others who are concerned with the early perinatal period that there is a “sensitive period” (Odent, Klaus) immediately following a physiologically normal birth.^{1,2} During this brief period a very unique hormonal milieu, orchestrated by the birth itself, drives maternal-infant interactions. These interactions are designed to wire the mother and infant for attachment, directing them toward behaviors that optimize the infant’s potential, first for survival and ultimately for well-being.³⁻⁸

While there is much yet to be revealed in our understanding of this sensitive period, the relational wiring in the brain of mother and infant is mediated by their hormonal state, which under physiologically normal conditions is highly advantageous to them both. The ability of the infant to engage his mother and to initiate feeding at breast as he expertly orchestrates his own well-being, is evidence of his biological and neurologic competency.^{2,4,8,9}

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COMPETENCY AND COMPENSATION

When the hormonal state of the sensitive period is compromised in non-physiologic birth situations, then the wiring begins to reorganize itself and infant competency is compromised.^{4,8,9,12} Hence, the competency of the infant at birth is a biological imperative that we would do well to reference in all assessments of the mother-infant dyad. When we have any concerns about the well-being of the infant, we must consider all that transpires in this sensitive period, just as we must consider the implications of the prenatal experiences of the dyad.

In our assessment of infant competency, it is essential that we gain new awareness and enhanced skills in discerning physiologically “normal” behavior from that which is only culturally “common”. Because we have lost our compass for the physiologic norm through the medicalization of birth, we must call into question any and all maternal and infant behaviors that we have come to view as “normal”. Indeed, barring a very serious or obvious medical concern at birth, the earliest possible indication of loss of competency in the infant is likely to be an inability to feed at breast.^{2,4,8,9}

Briefly reviewing our understanding of the fully competent infant at birth, we recognize the infant’s ability to elicit maternal response, to recognize and respond to sensory maternal cues and to loop with the mother in a synchrony

that quickly establishes the vital bond between them. These behaviors assure that his need for the presence of his mother — and food, warmth and firm attachment — is met. Thus, the infant begins to modulate his own experience in the world and his level of competency expands in a symbiotic relationship with his mother.

We recognize the competent infant as one who is able to stabilize, organize and regulate within the environment of the mother's body. The infant, whose intelligence is directed toward rapidly establishing his best neurological path for survival will expertly detect the most effective means toward that end, while rapidly eliminating those pathways that are less efficient. As we observe the infant, we are witness to the elegant brilliance of such a model, a model in which competency is rapidly rewarded with connection, with familiar sensory information (voice, taste, scent of the mother, for example) and with the mother's milk at her breast. Primitive neonatal reflexes drive feeding in the newborn. Repeatedly, the infant actively seeks attachment, and the mother responds. Competency is accomplished as the infant drives attachment and establishes active feeding at breast. In any useful assessment of the dyad, we must always remember the nature of the infant and observe him from the expectation that full competency is his birthright. When we see it from this perspective, we view his social efforts in their truest sense — his effort to actively seek attachment and caretaking.^{2,4,7,8,10-13}

By contrast, we are also able to detect the inherent design risks in a system that relies upon relationships for survival. For example, when birth is interventive, the infant may have to rapidly reorient to a medicated, non-responsive or absent mother; he may struggle to function through his own medicated nervous system, he may have to respond to stresses for which he was not designed and he may have to make so many compensations that he risks losing his orientation altogether. Within the context of the infant's efforts to feed at breast is the entirety of his potential. Whether he succeeds or not is the first issue, but the means by which he does succeed remains just as significant.^{4,8,10-12}

COLLABORATIVE CARE TO RESTORE COMPETENCY

Because competency in feeding at breast is the primary indication that a newborn has the potential to thrive, absence of competency is the first indication that the infant's potential for well-being is compromised. Lactation consultants have long observed that babies born medicated have more difficulty feeding, however a deeper understanding of impaired competency is a complex issue that even lactation consultants are just beginning to consider. As lactation

consultants begin to gain greater understanding of the impairments associated with compensatory behaviors, they will necessarily need to reach for new skills, new tools and new kinds of collaboration in assisting babies in regaining competency.⁹ Collaboration between lactation consultants and other holistic practitioners is a new idea that deserves broad exploration. In this paper we explore the means by which collaboration between lactation consultants and chiropractors can facilitate healing.¹⁴

ASSESSMENT

Since most infants experiencing feeding difficulties will be seen by a lactation consultant prior to any referral for chiropractic care, it is helpful that chiropractors working with breastfeeding babies become familiar with the assessment process utilized by the lactation consultant.

Infants who can feed, do. Infants who do not feed, cannot. While some infants cannot feed well because they are physiologically or neurologically impaired, the vast majority have other impediments, ranging from structural restrictions and birth trauma to inefficient latch and misinformation. While management and latch issues can be rectified through teaching of the family and minor supportive interventions, there are significant issues that need further intervention to correct. Infants who have experienced trauma, who have integrated compensatory behaviors or who have structural restrictions will not regain full competency unless those underlying factors are treated. Some infants cannot feed at all without causing maternal pain or cannot remove sufficient milk, no matter the teaching or management interventions employed. There are other infants who, given such interventions, can feed well enough to gain weight and relieve maternal pain, but who never fully release their compensatory behaviors well enough to achieve optimal competency. In all of these cases, making an informed referral for structural treatment has proven to have excellent outcomes.

It is through the history and functional assessment that the lactation consultant is able to determine a need for chiropractic referral. A complete and thorough evaluation of the nursing dyad facilitates assessment and treatment planning. Many of the components of the IBCLC's assessment overlap that of a thorough chiropractic history and examination¹⁴ and can, with patient permission, be shared during the referral process. (*Table 1*)

MAKING THE REFERRAL

Based upon a thorough intake, the care plan may include various components, but should include referral

TABLE 1
COMPREHENSIVE LACTATION HISTORY AND ASSESSMENT

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PRENATAL CONSIDERATIONS

- mother's own birth
- mother or father breastfed
- feelings about motherhood/breastfeeding
- previous birth or breastfeeding experiences
- infertility
- history of breast reduction surgery, breast implants or breast trauma or injury
- unusual structure or pelvic anomalies
- uterine anomalies, endometriosis, fibroids
- history of injury or trauma (including abuse)
- treatment history such as allopathic (surgery, medications) or holistic (chiropractic, acupuncture, homeopathy, etc)
- pre-existing medical concerns
- cultural biases pro or con

PREGNANCY

- nutritional profile
- emotional experience
- family support
- parity & gravidity
- testing procedures
- complications
- interventions
- illness
- medications
- supplements
- supportive interventions
- breast changes
- breastfeeding education and preparation
- blood type compatibility

LABOR AND DELIVERY

- location of birth
- attendants
- birth intention/plan
- gestational age of infant
- emotional experience of the family
- interventions or concerns including prodromal labor, PROM, antibodies for GroupB strep+, induction, medications, episiotomy, augmentation of delivery, precipitous delivery
- length of labor and delivery
- difficulties with 2nd or 3rd stage, cesarean birth
- physiologic or non-physiologic clamping/cutting of cord
- post-birth pitocin

EARLY PERINATAL PERIOD

- premature cord-clamping
- separation (infant skin-to-skin/to breast before or after — length of separation)
- interventive procedures such as suctioning, drying, warming, resuscitation, eye drops, vaccines, bathing, vit K, swaddling, blood draw
- NICU
- suturing or medication of mother
- medical concerns for mother
- experience of first feeding and attachment — under hormonal or external direction?
- exposure to artificial nipples or artificial feeds (including formula/glucose water)
- birth weight
- circumcision
- elevated bilirubin, use of bili lights
- stooling and voiding patterns

POST-PARTUM PERIOD

- comparison of birth weight vs 2 day or discharge weight, follow-up weights
- date of and experience of onset of Lactogenesis II
- cue or scheduled feeding
- infant's interest in feeding/infant's alertness
- discharge instructions to parents instructions or advice from other HCPs or LC's
- family's expressed commitment to breastfeeding
- co-sleeping/shared sleeping/isolated sleeping

OBSERVATION — VISUAL ASSESSMENT OF INFANT & INTERACTIONS

- infant arrives in car seat "bucket"/soft carrier/in arms, presence of a pacifier, hands swaddled, infant swaddled, responsiveness to baby's cues, talking to baby and making eye contact or avoidance and language that suggests an adversarial tone or blaming of baby vs supportive and nurturing dialogue
- observe for visual symmetry, appearance of comfort/discomfort in body, worried look, skin turgor, fontanelles, shape of head, bruising including of eyes, infant prefers to turn head to one side, refuses to turn head to one or either side, or is comfortable in mid-line, chin retracted or tucked, inability to extend or flex, narrowing of face or head esp. in older infant, underdeveloped or overdeveloped musculature, state of organization, rooting, licking, sucking as compensation vs suckling as competent skill, tongue appearance and function,

consideration of ankyloglossia (tongue-tie) including extension, elevation, lateralization, cupping, peristalsis, bunching, thrusting, flattening, shape of palate, clamping, appearance and “feel” of labial and lingual frenula and visual assessment for thrush symptoms

OBSERVATION — VISUAL ASSESSMENT OF FEEDING

- Observe the infant self attach if possible
- observe the feeding prior to interventions and re-observe after teaching to assess improvement
- observe posture, “doing to” baby vs allowing baby to feed such as placing or pushing nipple into baby’s mouth, leaning into baby, allowing baby to slurp nipple, allowing baby to nipple-feed and pushing or holding baby’s head — latch — gape (if wide upon latch, is it sustained), do lips flange, seal or suck in, does he spill milk, click, smack, snort, break seal, have an organized or disorganized feeding pattern — suck/swallow/breathe synchrony, defensive feeding behaviors, abnormal breathing patterns
- observe for arching or aggressive refusal of the breast, single-sided discomfort, preference of certain positions for feeding
- feeding influenced by flow — too rapid/too slow, feeding influenced by maternal fear or pain
- infant falls asleep at breast, feeds in a lethargic state, making ineffective and passive feeding efforts
- infant is effectively nourished, but passively-fed, with much maternal support
- milk transfer evaluation may include observation, fullness vs softness of breasts, evaluation of transfer from container if used (bottle, cup, syringe, supplementer) and test weighing
- use of nipple shield
- observe for variations with interventions in place (positioning, improved latch, focusing on asymmetric latch as mother leans back to allow natural positioning, use of nipple shield, with supplement at breast or with breast compressions, finger feeding, feeding after dosing with Bach Flowers or upon co-bathing). Can baby achieve an efficient and painless (for mom) latch and maintain the latch to achieve satisfying feeding
- is baby removed from breast after falling asleep or long period at breast — wakes, fusses, needs to be immediately put back to breast or does baby finish feeding, suckle for comfort and self-detach fully sated when bottles are used, re-assessment will be made using paced feeding.
- Observation — Further Evaluation
- may observe for mid-line defects, especially if tongue-tie is present, birthmarks, cradle-cap, eczema, “baby acne”, diaper rash, reflux behaviors (and diagnosis or treatment) and bowel habit
- Any suggestion of food allergies or poor gut health in the infant may be met with misguided belief that the infant

may be “allergic” to his mother’s milk, inappropriate replacement with formula and failure to properly treat the mother and infant.

- feeding, including comfort or pain, pinching, a “strong suck”, chewing or chomping, burning, a sensation of glass or electricity in her breasts, sand-paper rubbing or other discomfort, as well as the appearance of her nipples before and after feeding.
- assess for secondary pain from thrush or Raynauds of the nipple, for plugged ducts or mastitis and for treatment with antibiotics or other medications
- observe the mother’s nipples and breasts for flatness or retraction of nipples, marked asymmetry, wide-spacing, size and elasticity of nipples, size and elasticity of breast tissue, ductal development (hypoplasia?), appearance of areolar tissue and/or nipples, evidence of tissue trauma including cracks, fissures, blebs or blisters (has mother been wearing any device to provide comfort or to encourage nipple eversion?)
- Does mother express concerns about her milk supply? Has she been expressing her milk? Under what circumstances, how often, by which method and what are the results?
- If pumping, is she using the correct size flanges on her pump? Is the mother who is using a nipple shield using the correct size and attaching it properly?
- Is there reason for concern about supply, although mother is unaware of such? Has mother used galactagogues or other interventions such as chiropractic or acupuncture to support milk supply?
- With supportive teaching and/or interventions, is infant’s feeding improved? Is mother’s experience improved? Is feeding efficient and pleasurable for the dyad?
- Are supportive measure needed for mother’s milk supply?
- Is baby able to feed more efficiently, but only with a nipple shield? Is this to reduce maternal pain or due to infant’s refusal or inability to latch otherwise?
- Is baby able to feed more efficiently but only with supplementation at breast?
- Is it necessary to take baby off breast for a period to offer an alternative feeding method, due to maternal pain?
- Does the infant need supportive nutrition that cannot be delivered at breast or does he need measures such as finger-feeding to support suckling skills?
- Determine if supplementation is necessary and if so, how much and by what method breastfeeding is best supported for the family.

The lactation consultant will attend throughout the interview for the mother’s knowledge of breastfeeding or for misinformation, supporting the mother during teachable moments and utilizing anticipatory guidance where possible.

for neuromusculoskeletal evaluation and appropriate chiropractic treatment when the infant appears to be tongued, has visual asymmetry or asymmetric recruitment of musculature, receded chin, abnormal head shape, narrowing of face or high palate, has a preference in turning head to one side, only turns head to one side or maintains head in midline (not turning to either side), exhibits preference to feeding on one side only or mother experiences pain in nipple when feeding on one side only. If the infant has compensatory behaviors consistent with asymmetry, tightness or restrictions that are not resolved through teaching and intervention such as clamping, biting, chewing, sucking in lips, slurping, failure to achieve and sustain a gape, passive feeding, recruitment of compensatory musculature, failure to maintain a latch and sucking but failing to suckle, the referral is appropriate. Refer the infant who exhibits an appearance of physical discomfort while positioned for feeding, if there is a known mal-presentation or birth injury or trauma, prodromal labor or precipitous or prolonged second stage. Refer the infant who exhibits defensive behaviors such as bunching or thrusting tongue, arching, spilling milk, pulling on and off breast, clicking or other indications of breaking suction, failure to suckle for comfort and passive feeding.^{14,15}

CHIROPRACTICE CARE

In utero constraint, the birth process, interventions and birth trauma and early handling of the neonate may all contribute to alterations in structure that affect normal function of the neonate. The chiropractor will assess neurologic integrity (including infantile reflexes like rooting and suckling, suck, swallow, breath synchrony and other neurologic milestones (eye contact, response to sensory stimuli, etc)), cranial, spinal and extraspinal joints for stability and range of motion as well as cerebral spinal fluid rhythm, and finally muscle length, tone and symmetry or asymmetry. In conjunction with the detailed history and observations by the lactation consultant and chiropractor at breast, rest and play, a thorough neuromusculoskeletal examination may indicate concomitant neurologic, genetic or structural problems that could impede breastfeeding, including, but not limited to, ankyloglossia, temporomandibular injury, a fracture (most often cranial or clavicular), avulsion (brachial plexus), hypotonicity (cerebral palsy), diaphragmatic dysfunction resulting in a hiatal hernia (and reflux) or a genetic syndrome.^{14,15}

Any impediment to the normal initiation of the hard wired program to seek sustenance will result in strong compensatory behaviors in the neurotypical neonate. Early

detection and intervention is critical to prevent failure to bond, infant weight loss or failure to thrive, damage to mother's nipple or decreased stimulus for milk production. The longer and more vital the compensation is to the neonate, the impressionably plastic brain will more deeply imprint the behavior. Likewise, any surgical intervention, like a frenotomy, is more easily and safely performed at a young age with only the use of local anesthetics as an outpatient rather than waiting until a child is older than 6 months when the procedure may require general anesthesia and in the rare case, an overnight hospital stay.¹⁵

Examples of trauma or physical limitations that can result in interference with this normal physiologic process follow: a prolonged labor with the fetus in an asynclitic presentation can result in a hyperflexion subluxation at C0. This will restrict the normal extension at the cranial base necessary for the infant to gape widely and encompass the nipple and areola in the mouth to suckle. Examination may reveal hypertonicity of the anterior cervical and submandibular muscles and compensatory behaviors in this infant may manifest as arching away from the breast using the lower cervical and upper thoracic spine. Another example of subluxation as a result of a presenting congenital physical limitation resulting in compensation would be the submucosal tongue tie which causes abbreviated tongue action (extension, elevation and lateral deviation) and mandibular excursion by tethering the mandible sublingually. The compensatory behaviors may include excessive hyperextension at C01 (resulting in inflammation, increased arousal due to sensitivity and pain, muscle spasm and subluxation) in an attempt to gape more widely as well as over development of submandibular muscles. One may also see hypertonicity of the muscles of mastication as this infant attempts behaviors to get the nipple into the mouth and hold it there (walking up the nipple with their lips and gums, clamping or biting the nipple or grinding the nipple by moving the mandible from right to left).¹⁴

Whether or not it is established that there is need for co-management in any of these cases with an additional specialist (pediatric surgeon, orthoped, or neurologist), treatment planning to address these issues usually consists of several visits in rapid succession (1-2 days apart) to help facilitate a successful latch, as further weight loss or failure to gain weight has a more dramatic consequence at this young age. Further, premature weaning may be avoided when the mother experiences rapid, noticeable improvement in breastfeeding.

Treatment consists of myofascial release of associated

soft tissue structures (cranial and submandibular, cervical and tongue muscles), adjustments to the individual cranial bones and spinal vertebrae, lymphatic drainage and light massage techniques and specific stretches or range of motion exercises as indicated.¹⁴ Frequency and length of care is predicated on the pre-existing factors. For example, severe cranial molding from in utero constraint will respond more slowly than an infant who's cranial molding was due to a prolonged labor. The treatment plan may range from 1-3 visits within a week reaching full resolution to an initial 3 visits in one week followed up with 2 visits/week for an additional 3 weeks, 1 visit/week for an additional 3 weeks and 1-2 follow up visits over the next 6 weeks. This plan may be tempered by other interventions. For example, were an infant to require a frenotomy, it would be most efficacious to see the child as soon as possible after the procedure to assure structural integrity secondary to the restraint of the infant cranium during the procedure as well as to facilitate integration of the increased range of motion of the tongue by reducing the interference of any residual structural compensations. Home care protocols¹⁴ should be available for parents to continue to work with the neonate between visits as well as recommendations for ongoing lactation and peer support. Although successful breastfeeding may be the immediate goal, the long-term goal is structural normalization that can potentiate neurologic competency and appropriate development of oral facial structures and oral motor, and in some cases, respiratory skills.

RESTORING COMPETENCY

Overall, two groups of infants are best served through collaboration between the lactation consultant and the chiropractor. Infants who cannot feed efficiently or who cannot feed without experiencing discomfort or causing discomfort to their mothers, even after corrective interventions have been integrated, compose the first group. This group is more commonly referred for chiropractic care as feeding is significantly compromised and objective measures, such as weight gain and pain tend to be unsatisfactory. They may also be referred for other specialized care, in conjunction with chiropractic care, for example in the case of tongue-tie where a frenotomy can be performed by a pediatric surgeon, ENT or oral surgeon while the chiropractor can address the structural compensations that ensued from the neonate's attempt to succeed at breastfeeding despite the tongue tie. Success is also commonly assessed through the same objective measures and so long as the lactation consultant, chiropractor and mother maintain communication and have clear objectives, full competency may well be restored.^{14,15}

The second group is often overlooked. These are the infants who recover enough function to feed well enough that most parents and practitioners will be satisfied with objective measures such as weight gain, developmental milestones and maternal comfort. Often, this second group never recovers full competency, as compensatory behaviors become integrated and direct the infant's experiences and development. Compensation may stem from unresolved birth or perinatal trauma, including such medical interventions as induction, anesthesia, augmentation of delivery, cesarean delivery, premature cord-clamping, separation and invasive newborn procedures.^{2,4,7-11} Further, supplementation with formula, exposure to antibiotics or hyperlactation, as well as cesarean delivery may damage the gut mucosa and lead to further compensation.

These infants are often described as "high-need" or having an "intense" or "needy" personality. They are often described as having "colic" or are termed "fussy". Many parents describe these infants as "poor sleepers" or "poor nappers", difficult to travel with in a car, often uncomfortable, sometimes having very "high sucking needs". Often, personality is blamed for the difficulties the infant is experiencing. Infants often have symptoms of gut fragility including reflux, allergies, rashes, congestion, gas, infrequent stooling patterns, pasty stools and vomiting or spitting up. They will sometimes exhibit developmental delays, but more often will be at the lower range of normal. When full competency is the goal, these infants may require a broader holistic approach to healing that includes chiropractic, energy medicine (such as homeopathy, Bach Flowers, or EFT) and gut healing.

While we do not yet fully grasp the implications to the human infant, nor to the maternal-infant dyad, when early trauma causes impaired function and loss of competency, we can take significant steps to heal them through awareness, proper assessment and integrative interventions that make full competency the goal. As the lactation consultant and chiropractor find a common language in their abilities to assess form, function, competency and compensations, the dialogue between them can expand and the opportunity to provide broader and deeper healing is a realistic and achievable objective. The very possibility of restoring the competency that forms the foundation for all loving human relationships is surely a worthwhile goal by all accounts.

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