Douglas PS, Keogh R. Gestalt breastfeeding: helping mothers and infants optimise positional stability and intra-oral breast tissue volume for effective, pain-free milk transfer. Journal of Human Lactation. 2017;33(3):509-518

Gestalt breastfeeding: helping mothers and infants optimise positional stability and intra-oral breast tissue volume for effective, pain-free milk transfer

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Abstract

In the past decade, biological nurturing and activation of maternal and infant instincts after birth have constituted a major advance in clinical breastfeeding support. Yet physiological breastfeeding initiation is not enough to ensure ongoing pain-free and effective breastfeeding for many pairs. Current interventions, including 'hands-off' mammalian approaches, do not improve breastfeeding outcomes, including in randomised controlled trials. Back-arching, difficulty latching or staying on the breast, and fussing at the breast are common signs of infant positional instability during breastfeeding. These cues are, however,

often misdiagnosed as signs of medical conditions or oral connective tissue abnormalities, and underlying positional instability is not addressed. New clinical approaches are urgently required. This article offers a clinical approach to fit and hold (or latch and positioning), 'gestalt breastfeeding', which aims to optimise positional stability and intra-oral breast tissue volumes for pain-free effective breastfeeding. The word *gestalt* (pronounced 'ger-shtolt') means 'a whole that is more than the sum of its parts.' Gestalt breastfeeding builds on the theoretical foundations of complexity science, physiological breastfeeding initiation, and new understandings of the biomechanics of infant suck elucidated in ultrasound studies. It also integrates simple psychological strategies from applied functional contextualism, popularly known as Acceptance and Commitment Therapy, empowering women to attend mindfully to breast sensations and their baby's cues. Gestalt breastfeeding can be reproduced for research purposes, including in comparison studies with oral surgery, and has the potential to improve breastfeeding outcomes.

Background

In the past decade, the physiologic approach to breastfeeding initiation, which includes skin-to-skin contact, biological nurturing, and activation of both maternal and infant instincts in the first hours after birth, has constituted a major advance in clinical breastfeeding support (Colson, Meek, & Hawdon, 2008; Moore, Berman, Anderson, & Medley, 2016; Schafer & Watson Genna, 2015; Smillie, 2016; Widstrom et al., 2011). Yet physiologic breastfeeding initiation is not enough to ensure ongoing pain-free and effective breastfeeding for many pairs over time (Brodribb, Kruske, & D, 2013). Although a Cochrane review demonstrates that face-to-face support by trained personnel, whether professional or lay, helps breastfeeding outcomes overall (McFadden et al., 2017), specific clinical interventions, including 'hands-off' mammalian interventions, have not been shown to contribute to

improved breastfeeding outcomes, including in randomised controlled trials (De Oliveira, Giugliani, & do Espirito Santo, 2006; Forster et al., 2004; Henderson, Stamp, & J, 2001; Hanne Kronborg, Maimburg, & Vaeth, 2012; HH Kronborg & Vaeth, 2009; Labarere et al., 2003; Svensson, Velandia, Matthiesen, Welles-Nystrom, & Widstrom, 2013; Wallace et al., 2006; Woods, Woods, Blackburn, & Sanders, 2016).

For example, nipple pain affects 34-96% of breastfeeding women (Berens, Eglash, Malloy, & Steube, 2016) and is a common reason for breastfeeding cessation (Odom, Scanlon, Perrine, & Grummer-Strawn, 2013). Yet studies which combine typical approaches to fit and hold with various topical applications for nipple pain show no convincing benefit (Dennis, Jackson, & Watson, 2014). New, theoretically sound approaches to clinical breastfeeding support are urgently required (Woods et al., 2016).

In this discussion, we use the term 'fit and hold' to refer to the way a woman's highly anatomically variable breast and body and her infant's highly anatomically variable intra-oral cavity, face and body interact and fit together in breastfeeding (commonly referred to as 'latch and positioning' or 'attachment and positioning'). A woman's unique anatomy, including breast size and elasticity; abdominal shape; lap length; nipple shape, size and direction; and upper and forearm length and shape, and her baby's unique anatomy, including palate contour; oral connective tissue length, attachments and elasticities; tongue length; oral cavity size; and chin recession or shape need to fit together in a way that supports positional stability, nipple protection or healing, and optimal milk transfer. This is particularly important in mother-baby pairs facing anatomic challenges, including (but not limited to) inelastic breast tissue, pendulous breasts, recessed infant mandible, high infant palate, and obesity.

In addition to nipple pain and damage, suboptimal fit and hold results in difficulty latching onto and staying on the breast, back-arching, marathon feeds, excessively frequent

feeds, excessive night-waking, fussiness at the breast, excessive crying, poor weight gain, and low supply. Suboptimal fit and hold often remains unidentified or misdiagnosed, including by breastfeeding support professionals, and its signs are misattributed to gastro-oesophageal reflux disease, allergy, or, most recently, to oral connective tissue restriction (Douglas, 2013; Douglas & Hill, 2011; Douglas, 2016). The effects of suboptimal fit and hold and other undiagnosed breastfeeding problems on infant behaviour may include a conditioned hyperarousal of the sympathetic nervous system, as detailed in the neurobiological model of unsettled infant behaviour (Douglas & Hill, 2013). Parents commonly introduce infant formula in response to infant behaviours which typically result from suboptimal fit and hold (Odom et al., 2013; Wasser et al., 2011).

The breastfeeding mother-baby pair is usefully conceptualised as a complex adaptive system (Douglas, Hill, & Brodribb, 2011). Inherent patterns of self-organisation emerge out of the multiple feedback loops which operate within the breastfeeding mother-baby complex adaptive system. These are determined by evolutionary history, emphasising the importance of supporting a woman's attention to the sensations within her own body, and to her baby's communications or cues. Because of these multiple neurohormonal and behavioural feedback loops, the breastfeeding pair are innately flexible and adaptive, ensuring resilience in the face of perturbation.

From the perspective of complexity science, clinical problems emerge out of multiple unpredictable interactions between co-evolving components in the complex adaptive system, rather than from the failure of a single component (e.g. oral connective tissues). Simplistic medicalised interventions (such as proton pump inhibitors, or frenotomy for restricted oral connective tissues in the absence of classic tongue-tie) disempower mothers, and risk unintended consequences. The breastfeeding mother-baby complex adaptive system also displays sensitivity to initial conditions, so that small disruptions in the breastfeeding

relationship early on, in the first hours, days or weeks, may have unpredictable and disproportionate effects later on (Douglas & Hill, 2013; Douglas et al., 2011).

What is gestalt breastfeeding?

In our specialist breastfeeding clinic, where mother-baby pairs seeking help have often already consulted with multiple breastfeeding support professionals, we've developed an innovative approach for both prevention of and repair of breastfeeding problems, 'gestalt breastfeeding' (Table 1). The word *gestalt* (pronounced 'ger-shtolt') means 'a whole that is more than the sum of its parts.' Gestalt breastfeeding integrates the theoretical frames of complexity science and physiologic breastfeeding initiation (Schafer & Watson Genna, 2015) with new understandings of the biomechanics of infant suck elucidated in ultrasound studies (Pamela S Douglas & Geddes, 2017; Geddes & Sakalidis, 2016). In our clinical experience, infants with breastfeeding problems, including those diagnosed with oral ties (in the absence of classic tongue-tie) whose parents seek a second opinion, and infants with oral aversion or ongoing breastfeeding difficulties after laser or deep scissors frenotomies, quickly respond to this intervention. Gestalt breastfeeding downregulates amplified feedback loops in order to support the mother-baby complex adaptive system's empowerment and resilience.

We offer a mother information and support in five steps, delivered flexibly in response to her needs, so that she is empowered to experiment and discover a fit and hold that works for her and her baby across their unique anatomic configurations. We are careful to avoid ideology (Burns, Schmied, Fenwick & Sheehan, 2012), and to use words that are non-mechanistic and emotionally neutral or encouraging (Table 2). A typical intervention starts with observation of the mother-baby pair's usual fit and hold. (The woman may be invited to demonstrate this fully clothed using a doll if she has severe nipple damage.)

Step 1: Understanding the biomechanics of healthy breastfeeding

Ultrasonography of breastfeeding pairs demonstrates that milk transfer occurs in response to the intra-oral vacuum generated by reflex downward excursion of the jaw, at the same time as the mammary ducts contract with milk ejection. The infant tongue moves downward as a single unit in tandem with jaw depression (Pamela S Douglas & Geddes, 2017; Geddes & Sakalidis, 2016).

The breastfeeding infant's tongue is most accurately conceptualised as an adaptive, supple organ which moulds to fit around available intra-oral breast tissue, cushioning it. The shape of the tongue alters in response to the volume of breast tissue in the mouth. The greater the intra-oral breast tissue volume, the closer the nipple is to the junction of the hard and soft palate, which protects it from damage. The tongue does not grasp the breast. The tongue also does not need to extend beyond the lower gum, lateralise, or lift independently during sucking (Douglas & Geddes, 2017; Geddes & Sakalidis, 2016).

Positional stability requires the elimination of conflicting intra-oral vectors of force. Conflicting vectors are commonly created, for example, by the weight of the breast tissue pulled downwards by gravity, or by breast tissue drag off to the side because the baby's head is positioned too far towards the ipsilateral maternal arm. Conflicting vectors compromise intra-oral breast tissue volume. In the context of positional stability, intra-oral vacuum draws incrementally more breast tissue into the oral cavity with each drop of the jaw, until the mouth is full of breast tissue, and the jaw is wide open (Douglas & Geddes, 2017).

When a baby's position is unstable, the baby has difficulty latching on, fusses and pulls off the breast, back-arches, or seems to refuse to feed. Conflicting vectors of force are being generated, so that there is drag on the intra-oral breast tissue. Positional instability results in suboptimal intra-oral breast tissue volume, which may result in poor milk transfer and nipple pain (Douglas & Geddes, 2017).

Step 1 includes a short demonstration video illustrating the biomechanics of healthy infant suck. A knitted breast is used to illustrate the problem of breast tissue drag, the desired outcome of optimal intra-oral breast tissue volume, and symmetrical face-breast bury. The breastfeeding support professional then helps the mother-baby pair experiment with Steps 2-4 in an iterative and flexible way. Many techniques popularly used in clinical breastfeeding support are not used in gestalt breastfeeding, because they interfere with the baby's breastfeeding reflexes and intra-oral breast tissue volumes (Table 3).

Step 2: Preparing body and mind for comfortable breastfeeding

The semi-reclined position helps activate the infant's breastfeeding reflexes, and allows the woman's body and shoulders to relax, as her lap opens up (Colson et al., 2008; Schafer & Watson Genna, 2015; Smillie, 2016). Breastfeeding often improves in the semi-reclined position, but this isn't because gravity slows down milk flow. Milk flow depends on the vacuum generated intra-orally in tandem with mammary duct contraction. Breastfeeding improves in the semi-reclined position because the infant is more positionally stable and better able to co-ordinate sucking, swallowing and breathing (Figure 1).

The breast needs to be exposed so that a circular 'landing pad' of approximately five centimetres radius about the nipple and areolar is available for the face-breast bury. The landing pad, and therefore the breastfeeding reflexes, can be compromised by encroachment of bras and clothing, or by an upper arm held too close, or by the way a pendulous breast and nipple fall in relation to the abdomen.

Teaching a woman to lift and shape her breast increases the risk of nipple pain fourfold (Thompson et al., 2016). This is because when she lets go of the breast, a vector of force is generated by the downward pull of gravity on the breast, which conflicts with the direction of the intra-oral vacuum. Sometimes the breast requires the support of a folded cloth underneath to expose an adequate landing pad. Occasionally women with very generous

breasts or downward pointing nipples need to lift the breast a little with their hand in order to expose an adequate landing pad. These women require careful education about the risk of generating a conflicting vector of force, and how to use the baby's face to carry the weight of the breast once they let go, so that there are no vectors of force conflicting with the intra-oral vacuum, compromising intra-oral breast tissue volume and positional stability (Figure 2).

Breastfeeding problems are linked with maternal distress and anxiety, predisposing to mood changes (Dias & Figueiredo, 2015). Gestalt breastfeeding integrates applied functional contextualism (popularly known as Acceptance and Commitment Therapy), a third wave behavioural psychology (Whittingham & Douglas, 2016). Women are empowered to use strategies of conscious muscle relaxation, in particular of the shoulders and arms; deep breathing; cognitive defusion from difficult thoughts; 'making room for' difficult feelings; and anchoring attention in the present moment, in order to respond to subtle changes in both infant cues and breast sensation. Gestalt breastfeeding relies on the concept of workability, also drawn from applied functional contextualism, in order to mitigate against the damaging effects of perfectionism.

Step 3. Switching on baby's breastfeeding reflexes

Gestalt breastfeeding teaches parents five strategies which switch on a baby's breastfeeding reflexes (Colson et al., 2008; Schafer & Watson Genna, 2015; Smillie, 2016). These are most reliably achieved across diverse anatomic configurations in a cradle hold in the semi-reclined position.

1. The infant's chest and abdomen lie flat against the woman's body and breasts, facilitated by the semi-reclined position (Figure 3).

2. The infant's bare hands move freely in order to pat the breast and embrace the woman's body, and are never trapped between her and the baby's body.

3. Firm pressure of the baby's chin and lower lip on the breast stimulates mouth-opening and sucking reflexes (Cantrill, Creedy, Cooke, & Dykes, 2014). This occurs when the baby is positioned so that his or her face lies on the breast and the baby is able to orient him or herself by moving the head with rooting or bobbing movements.

It is not necessary to take baby off the breast and re-attach if the initial latch is shallow. Repeated attempts to achieve a wider gape or to bring the baby on with an 'asymmetric latch' are often not successful, may worsen pain, and can cause a conditioned sympathetic nervous system hyperarousal at the breast for some infants (Douglas & Hill, 2013; Thompson et al., 2016). Instead of focussing on how the baby comes on to the breast, the mother is encouraged to commence micro-movements as soon as the baby starts sucking so that he or she is quickly positioned for optimal intra-oral breast tissue volume as the feed progresses, with elimination of conflicting vectors.

4. The infant cervical, thoracic, lumbar and sacral spines are aligned, with gentle forward spinal flexion achieved as the baby wraps around the maternal body. The neck is moderately extended, without lateral flexion or rotation of the cervical spine (Figure 4).

5. Gentle pressure between infant's shoulder blades supports the baby's 'core stability', allowing strong independent movements of the baby's head and neck, though force is never applied. In contrast, a hand pressing on the back of the baby's head or neck both flexes the neck, and risks interfering with the baby's breastfeeding reflexes, and should be avoided (Thompson et al., 2016).

4. Applying the power of micro-movements

Micro-movements are small experimental movements of the baby's body relative to the woman's breast and body, made by the woman as she supports the baby in her arms at the

same time as gravity draws the baby into her body. Movements of one or two millimetres at a time are made in multiple directions and frequently throughout the feed. One kind of micro-movement occurs as the woman uses her forearm to change the angle of the baby's facial contact with the breast; another kind of micro-movement occurs as she slides the whole of the baby's body against hers. Experimentation with micro-movements, by observing the baby's responses and mindfully attending to changing breast and nipple sensation, is key to effective pain-free milk transfer. Micro-movements ensure that the baby is relaxed and stable, and that the woman is able to find a fit and hold in which she experiences a deep drawing sensation of her breast tissue, without pinching or pain.

The forearm is used as a lever to achieve face-breast symmetry, so that the lower half of the face is deeply buried into the breast, creating an interface line that is parallel to, or square with, the breast (Figure 5). This is vitally important in the context of unpleasant nipple sensation, or pain. Four points - the nose and buried upper lip (with the nose either apposed to the breast or just a millimetre or two above it), both cheeks, and the chin - are symmetrically buried into the breast (Thompson et al., 2016). The lips sit neutrally against the breast, and are not visible. They do not need to flange, and if they are visible, intra-oral breast tissue volume is compromised (Douglas & Geddes, 2017). Pulling the breast tissue back to visualise the baby's lips, or using a finger to make the lips turn out, pulls breast tissue out of the intra-oral cavity and should be avoided. Once a workable position has been found, the mother's elbow typically requires the support of a firm cushion, so that her shoulder and arm can relax and musculoskeletal pain does not occur.

After permission to touch the woman's arms is obtained, the breastfeeding support professional may ask the mother to take deep breaths and consciously relax her shoulders and arms as she holds her baby against her body. Then the breastfeeding support professional places hands gently on the woman's forearms in order to assist with micro-movements,

carefully optimising the face-breast interface, and asking the woman for feedback about breast sensations. Together, the woman and breastfeeding support professional watch and respond to the baby's subtle cues. This hands-on work helps the mother to lay down new neurological pathways in the clinical consultation, so that she can retrieve somatic memories when experimenting for herself later on.

Once the biomechanics of infant suck are properly explained, it becomes clear to parents that digital tongue massage, other oro-facial muscle stretching and massage, and oral connective tissue stretching will not alter sucking dynamics in neurotypical infants with breastfeeding difficulty. This kind of manual therapy risks disempowering the mother-baby pair, by shifting the focus from the mother's empowered capacity to achieve optimal milk transfer through bodily fit and hold, to an externally applied, 'fix the baby' intervention. Frequent digital intra-oral manoeuvres also risk oral aversion.

5. Experimenting with 'around the dial' breastfeeding

Once women understand the biomechanics of breastfeeding, and have experienced the benefits of strategies for ensuring optimal intra-oral breast tissue volume, they may choose to experiment with gestalt breastfeeding in a range of positions 'around the dial' of the breast. All positions 'around the dial' require the same attention to the details of positional instability, face-breast symmetry, and intra-oral breast tissue volume.

Lying down breastfeeds may be addressed in the first consultation, because of night management benefits. Maternal hips and knees should not be flexed, firm pillow support behind the mother's spine is required, and the baby lies on his or her side, pressed flat against the mother's body. The mother's arm is not under the baby's head.

Other positions 'around the dial' are usually only explored later on. The koala position often creates conflicting vectors and in our experience works for a minority of women, depending on lap length and other anatomical configurations. We almost never use

the football hold, due to the high incidence of conflicting vectors observed in this position. In time, women learn to replicate the bodily sensations of gestalt breastfeeding in situations of minimal postural recline.

Conclusion

Maternal nipple pain and infant behaviours such as back-arching during breastfeeds, crying and fussing with breastfeeds, or difficulty fitting onto or staying on the breast are often signs of positional instability. Current fit and hold interventions, including 'hands-off' mammalian approaches, do not improve breastfeeding outcomes, including in randomised controlled trials. Given the limitations of existing fit and hold interventions, is not surprising, then, that signs of positional instability are often inappropriately medicalised by breastfeeding support professionals who hope to offer solutions. For example, in the absence of classic tongue-tie, many mother-baby pairs with positional instability problems are referred for laser frenotomies of the lingual and maxillary labial frenula (Joseph et al., 2016; Walsh, Links, Boss, & Tunkel, 2017), despite lack of evidence of efficacy, and risk of side-effects (O'Shea et al., 2017). There is urgent need for an effective, reproducible (though flexible and woman-centred) fit and hold intervention.

The authors of a recent systematic review which found that that breastfeeding mothers had difficulty transferring what they gained from existing interventions into real-life breastfeeding practices, call for theory-based breastfeeding interventions focussed on modifiable causes of breastfeeding cessation, and for intervention fidelity (Woods et al., 2016). Gestalt breastfeeding responds to this call, by directly addressing the two most common reasons parents give for commencing infant formula: nipple pain and unsettled infant behaviour (Brown, Dodds, Legge, Bryanton, & Semenic, 2014; Odom et al., 2013; Redsell et al., 2010; Wasser et al., 2011). Gestalt breastfeeding integrates four theoretical

frames: first, complexity science; second, physiologic breastfeeding initiation; third, findings of ultrasound studies investigating the biomechanics of infant suck; and fourth, applied functional contextualism, a modern form of cognitive behavioural therapy. Building on these strong theoretical foundations, a novel intervention has been developed (Table 4).

Gestalt breastfeeding aims to optimise positional stability and intra-oral breast tissue volume, so that nipple pain is prevented or repaired and milk transfer optimised across the wide variety of maternal and infant anatomic diversities. Gestalt breastfeeding promotes the empowerment and resilience of the complex adaptive system of the breastfeeding pair, by supporting women to experiment with breast sensation and observation of and response to infant cues. Gestalt breastfeeding can be taught to breastfeeding support professionals, and reproduced for research purposes, including in comparison studies with oral surgery. This new approach to clinical breastfeeding support has the potential to improve breastfeeding outcomes, and is currently undergoing evaluation.

Acknowledgements

Gestalt breastfeeding builds on the work of many clinical breastfeeding support pioneers. In particular, we acknowledge the work of Anne-Marie Widström, Rebecca Glover, Jack Newman, Tina Smillie, Nancy Mohrbacher, Susan Colsen, and Cathy Watson Genna, all of whom will recognise elements of their contributions in gestalt breastfeeding. We recently discovered Robyn Thompson's method, which has a similar focus on face-breast symmetry, and have used her 'four points of contact' model in this article as another way of describing symmetrical face-breast bury. The Gestalt Breastfeeding Online Program, including videos of application in various cases, photographs, and greater detail of the strategies used in gestalt breastfeeding, is available online at www.possumsonline.com. Accreditation of health professionals in the application of gestalt breastfeeding is available at

education@possumsonline.com. All proceeds return to our charitable organisation, Possums for Mothers and Babies Ltd, for the development of research and education materials.

Funding

The authors received no financial support for the research, authorship, and/or publication of this article.

Figures

Figure 1. The semi-reclined position in gestalt breastfeeding

Figure 2. This mother with a generous breast presented with severe nipple pain and damage. She achieved pain-free effective breastfeeding by experimenting with the principles of gestalt breastfeeding. She is in a very reclined position, which does not show in this photo. Whilst the baby has some lateral flexion of the neck, due to the way the mother's capacity to use her forearm as head support is constrained by the need to support her breast, she has found a fit and hold that is workable for them.

Figure 3. This woman presented with nipple pain. The baby was less able to extend his neck when breastfeeding on the right at first, due to the delicate shape of her breast. His most workable fit and hold was vertically down her body in a reclined position.

Figure 4. He also fed comfortably in a reclined cradle hold.

Figure 5. In an effective face-bury, the lower half of the face is buried into the breast, with a parallel or square face-breast interface. The four points of the nose, cheeks and chin are symmetrically buried. The lips are not visible.

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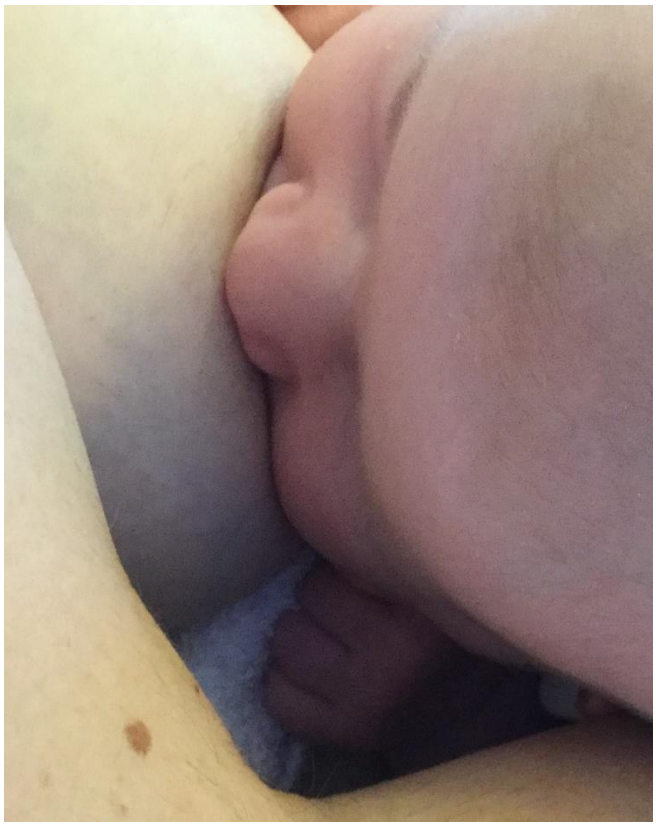

Tables

Table 1

Chapter headings and subtitles of the Gestalt Breastfeeding Online Program, which are accompanied by explanatory text, videos and photographs http://www.possumsonline.com/programs/gestalt-breastfeeding-online-program

Chapter title	Headings	Sub-headings
What is 'gestalt' breastfeeding?		
	The role of the sympathetic nervous system	
	Signs of fit and hold problems	
	Experimentation and workability	
Step 1: Understanding the biomechanics of effective milk transfer		
Step 2: Preparing for relaxed and comfortable breastfeeding		
	Preparing your body	A semi-reclined or 'deck-chair' position
		Noticing where your breasts and nipples rest without clothing
		The landing pad
		Conscious relaxation
		The generous breast
	Preparing your mind	Noticing sensations while breastfeeding
		It's normal to feel upset and to have painful thoughts when you face breastfeeding problems
		Clarify your values
		Notice and name your thoughts and feelings
		Anchor your attention in the present moment by deliberately paying attention
		Make room for those difficult thoughts and feelings

		Take actions that align with your values
Step 3: Switching on your baby's breastfeeding reflexes		
	Keep baby dialled down at the breast as best you can	
	Baby's hands are bare and feet supported	
	Baby's chest and tummy are flat against your chest and tummy	
	Baby is horizontal across your body	
	Your hand supports the baby's upper back	
	Baby's chin and lower lip plant into the breast	
Step 4: Applying the power of micro-movements		
	What are micro-movements?	
	The sweet spot	
	Forearm as lever	
	'Snuggle and slide' of baby's body	
	Head tilted back	
	Alignment of the spine	
Step 5: Gestalt breastfeeding 'around the dial'		
	Koala position	
	Lying down	
	On the move	
What gestalt breastfeeding isn't		
	Working out what's going wrong	
	Is there need for craniosacral therapy or myofunctional therapy?	
Other resources that may be helpful to you		
	For parents	
	For health professionals	

Table 2

Terminology

Preferred terms when delivering gestalt breastfeeding	**Technical terms or popular terms that are not used when delivering gestalt breastfeeding**
Face-bury	Facio-mandibular to breast symmetry
Mother-baby pair	Dyad
Dialled up	Conditioned SNS hyperarousal
Dialled down	Calm
Fit and hold	Latch/attachment and positioning
Fit onto the breast	Latch or attach
Mouth-opening	Gape
Generous breast	Large breast
Delicate breast	Small breast
Lovely round tummy	Fat stomach
Healthy bonding	Attachment (psychological)
Difficult thoughts and feelings	Anxiety and/or depression
Dialled up at the breast	Oral aversion; breast refusal
Sensitivity at the breast	Oral aversion; breast refusal
Workability and experimentation	Natural behaviours or natural breastfeeding
Breast tissue drag in the baby's mouth	Conflicting vectors which decrease intra-oral breast tissue volume

Table 3

Popular techniques that are not used in gestalt breastfeeding

Techniques to be avoided	**Rationale**
Breastfeeding pillows supporting the infant's body	Interferes with activation of breastfeeding reflexes; risks conflicting vectors (baby too high relative to breast)
Visible lips	If lips are visible, intra-oral breast tissue volume is compromised
Pulling breast tissue back to check lips	Creates a conflicting vector and draws breast tissue out of oral cavity
Flanged lips ('flip them out')	Lips are neutral during breastfeeding and do not need to flange; pulling lips out or having them visible compromises intra-oral breast tissue volume
Hand or fingers on back of baby's head or neck	Interferes with breastfeeding reflexes; may trigger back-arching; flexes cervical spine and interferes with intra-oral breast tissue volume

Sitting upright	Gravity creates a conflicting vector, intra-oral breast tissue volume is compromised, and baby pulls off or slips off the breast, and fusses
Leaning forward	Gravity creates a conflicting vector, intra-oral breast tissue volume is compromised, and baby pulls off or slips off the breast, and fusses
Lifting breast, shaping breast (c-hold, sandwich hold)	Conflicting vectors created when mother lets go of breast, compromising intra-oral breast tissue volume
Pushing breast into baby's mouth	Conflicting vectors created when mother lets go of the breast, compromising intra-oral breast tissue volume
Traction on skin of breast to lift nipple and areolar up level with baby's mouth	Conflicting vectors created when mother lets go of the breast, compromising intra-oral breast tissue volume
Taking baby off breast if attaches shallowly	Risks conditioned SNS hyperarousal at breast
Breast massage while breastfeeding	Conflicting vectors created, which compromise intra-oral breast tissue volume
Pumping while breastfeeding	Unable to optimise fit and hold
Persisting if baby is fussing	Risks conditioned SNS hyperarousal at breast
Bra or clothing touching baby's face	Interferes with activation of breastfeeding reflexes
Baby wrapped for feeds	Interferes with activation of breastfeeding reflexes
Baby's hands between bodies	Interferes with activation of breastfeeding reflexes; creates conflicting vectors and compromised intra-oral breast tissue volume
Counting sucks and swallows	Interferes with mother's capacity to relax and attend to breast sensations and infant cues
Lie back to control high milk flow	Lying back helps baby co-ordinate suck-swallow-breath due to optimised positional stability but this does not alter effect milk flow, since flow depends on intra-oral vacuum and mammary duct contraction only
Football hold	Planes of contact not parallel and head tilt compromised, so that intra-oral breast tissue volume is compromised

Table 4

What is new about gestalt breastfeeding?

Innovations	**Implications**	**References**
Theoretical frames		

New model of biomechanics of infant suck	Intra-oral vacuum not tongue action drives milk transfer; Positional instability results in conflicting vectors which compromise intra-oral breast tissue volume, impairing milk transfer and damaging nipples; Positional instability causes unsettled infant behaviour; Don't need to try to bring baby on with wide gape	Douglas & Geddes, 2017; Geddes and Sakalidis, 2016
Neurobiological model of unsettled infant behaviour	Positional instability from suboptimal fit and hold results in difficulty latching on or staying on the breast, back-arching, crying and fussing at the breast, and in some, conditioned SNS hyperarousal	Douglas & Hill, 2013
Psychological strategies from Acceptance and Commitment Therapy	Workability not perfection Deep breathing Conscious muscle relaxation Cognitive defusion Mindful focus on breast sensations and infant cues	Whittingham & Douglas, 2016
Avoid 'breast is best' and concepts of a natural, instinctive or right brain approach	Pressures and disempowers women who feel they have failed if their body doesn't appear to 'work'	Burns, Schmied, Fenwick & Sheehan, 2012
Intervention delivery		
Consenting hands-on support (placed on mother's forearms)		
The power of micro-movements	Forearm micro-movements 'Snuggle and slide' micro-movements	
Use of knitted breast	Illustrates concepts of landing pad, breast tissue drag, and optimal intra-oral breast tissue volume which protects nipple	
Use of technology		
Short videos	Illustrate healthy sucking; lying down breastfeeding	https://www.youtube.com/watch?v=CrysrsFzBWY
Parent's mobile phone	Photo from above baby's forehead to illustrate symmetrical face-breast interface; Photo from front to illustrate infant spinal alignment in cradle hold;	

	Photo from mother's view above to illustrate face-bury	

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