

NETWORK GUIDELINE

Title:	Positioning of the Preterm and Sick Neonate
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Risk Managed:	To ensure preterm and high-risk babies receive individualised positioning & handling that will optimise their neurological and musculoskeletal development and minimise potential complications

This document is a guideline. Its interpretation and application remain the responsibility of the individual clinician, particularly in view of its applicability across the different Trusts in the East Midlands Neonatal Operational Delivery Network. Please also consult any local policy/guideline document where appropriate and if in doubt contact a senior colleague.

Caution is advised when using guidelines after a review date.

In the exceptional circumstances that a Trust in the EMNODN opts not to follow an EMNODN approved guideline/monograph/SOP they should complete an [EMNODN Derogation Form](#).

REVIEW AND AMENDMENT LOG

Version	Type of Change	Date	Description of Change
1	-	-	-
2	-	-	-
3	No change	Sept 2018	Joint CNN & TPN Guideline transferred to EMNODN Guideline format
4	Guideline Update	June 2025	Guideline evidence base updated. Appendix added to include head shapes, audit template, step by step guide to creating boundaries

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Purpose

To provide guidance for multi-disciplinary use within the EMNODN on the principles of optimal positioning and handling of preterm and sick neonates. This guideline aims to enhance individualised developmentally supportive care and promote early positive experiences whilst supporting Musculo-skeletal and neurological development. Best practice positioning can support early neurodevelopment of the neonate and is part of a package of care that can help achieve optimal long-term outcomes for high-risk babies.

Family Integrated Care

This guideline supports principles of Family Integrated Care (FiCare). It is important that parents and care givers feel empowered to take an active lead role as early as possible and are educated to provide supportive positioning and handling of their baby in accordance with the principles outlined within this guideline.

Scope of Guideline

The guideline applies to all neonatal units within the East Midlands Neonatal Operational Delivery Network.

Introduction

Optimal therapeutic positioning and handling of babies receiving neonatal care is important and is the responsibility of all neonatal staff. Hunter (2010) identified that developmentally supportive positioning is an intervention that has been proven to improve postural and musculoskeletal outcomes as well as improve physiological outcomes and sleep states.

Gestational age must be considered alongside an individualised assessment.

Background

Active muscle tone begins to develop at around 36 weeks' gestation, when babies achieve a postural state known as physiological flexion. In the latter stages of pregnancy, a baby starts to gain strength in their muscles as they have consistent, dynamic uterine boundaries. A well term baby is usually able to maintain a midline position and maintain flexed arms and legs. They can use this position of stability to observe the world and begin to learn to move and explore within it. It is important to note that although well term babies should have no need for special positioning, those who are critically ill and/or sedated may need additional support in the form of nesting or pressure relieving mattress.

Premature babies will experience low muscle tone due to missed developmental stages in utero. It is not unusual for them to develop a preference to rest/turn their head in one direction. Without appropriate intervention, premature babies are at added risk of more exaggerated forms of positional plagiocephaly. Babies who have a persistent side preference together with low tone or reduction in movement through illness or prematurity, can develop stiffness or shortening of neck muscles. Positioning in developmental care aims to maintain full range of movement of the neck, prevent reduced ranges of movement, pain and to prevent the need for later physiotherapy intervention. Whilst skull molding may resolve in time, in extreme forms this can result in more permanent changes e.g. scaphocephaly.

Meeks and Cusack (2010) identified that developmental positioning aims to minimize or prevent fixed abnormal posture from developing e.g. 'frog posture' or the 'W' position.

Developmental positioning enables babies to coordinate movement patterns; for example, when learning to bring hands together for comfort, self-regulation and in later child development to explore toys, reaching and rolling. If this is not supported in early development, it can delay motor skill progression and achieving gross motor milestones.

A flexed, midline position, with head and neck in a neutral position is recommended. Hunter (2004) established that careful supportive positioning can help promote the normal structural alignment and neuro-motor control necessary for optimal development of a baby's posture and motor skills. Babies will feel safe and secure, and evidence has shown they are more physiologically stable when they have boundaries placed around them, mirroring the in utero environment. In addition, Altimier and Phillips (2016) identified that babies will gain comfort from being supported in positions which promote autonomic stability, when for example hands are grasped or touching together, fingers are sucked or when babies touch their face and head.

Key Principles for Positioning

The core principles of postural support and positioning include:

- a) Promote **flexion** of limbs, including trunk, hips and knees.
- b) Promote **comfort** and **behavioral state regulation** - ensure shoulders are rounded.
- c) Promote **midline** alignment - elbows to be close to the trunk, Hips in neutral position
- d) Promote **symmetry** - encourage hands towards face and/or together.
- e) Promote foot bracing - feet together and within the boundary/nest (not over the top).
- f) Provide appropriately sized **deep postural boundaries this ensures baby receives entire body postural support and provides resistance and continual opportunities for optimum positioning, even when baby is active.**

Identification of High Risk Patients for Positioning

Each baby should be assessed individually as part of the daily care planning process in order to determine the level of support needed to achieve developmental goals.

The following categories are identified as babies at higher risk of developing positional abnormalities or physiological instability:

- Babies <32/40 and/or extreme low birth weight <1000g birth weight (Merenstein and Gardner [2002] and WHO [2019])
- Sick babies born <37 weeks (Bliss 2006)
- Babies who are on long term ventilation
- Babies who are subject to perinatal hypoxia or neonatal encephalopathy
- Babies with skeletal abnormalities e.g.: skeletal dysplasia or arthrogryposis
- Babies undergoing prolonged muscle relaxation e.g. for ventilation & Hypotonic babies.

N.B. Well babies nursed in low dependency without monitoring must be positioned in accordance with safe sleeping guidelines and the Lullaby Trust (2024) safer sleep guidance.

Benefits of Optimal Positioning and Postural Support

- Flexed postures replicate the optimum physical position, which is essential for complete neurological development, (similar to the natural in utero positions)
- Helps maximise neuromotor and brain development (Ard, *et al.* 2018)
- Promotes physiological function and stability and reduces potential experiences of stress.
- Promotes good quality sleep which is essential for growth and brain development.
- Promotes self-regulatory behaviors (Warren and Bond, 2010)
- Promotes the conservation of energy and calorie expenditure.
- Promotes the coordination of the suck, swallow and breathe sequence.
- Promotes stability and therefore maximises opportunities to positively interact with their parents

Considerations for Postural Management

Babies should be regularly repositioned over the 24 hours period utilising all positions which are applicable and encouraging options such as skin to skin. Any changes in positions should be clearly documented.

Clustering activities of care together can reduce unnecessary handling of a baby and allow deep sleep between interventions. The Newborn Individualized Developmental Care and Assessment Program (NIDCAP) (2009) recognised that cares should be cue-based and individualised, as sometimes clustering can be overstimulating for the extreme or sensitive premature babies.

Merensteing and Gardener (2002) identified that containment/comfort holding maneuvers during procedures can reduce physiological and behavioral responses to stressful procedures.

NIDCAP (2009) and the Family and Infant Neurodevelopmental Education (FINE) program advocate the '5 step dialogue' guide when handling neonatal babies. The 5 steps are: preparation, touch permission, tuning in and pacing, connection and breaking contact. This strategy is easy to apply and advocates constant touch throughout any interaction.

This principle can guide multi-disciplinary and family integrated care practice, promoting gentle touch of a baby, demonstrating confidence to reassure the baby it is safe, and talked to before being moved, which warns of handling, where possible touch contact should be maintained with baby throughout an intervention, and constant verbal reassurance provided from start to finish.

N.B. The use of positioning aids such as a boundary necessitates careful monitoring of the baby's temperature to avoid overheating.

Recommendations for referrals to Allied Health Professionals

Where services are available, it is considered best practice to refer babies at risk of altered patterns of movement due to neurodevelopment factors, extremely premature and low birth weight babies to the neurodevelopmental Physiotherapist and/or Occupational Therapist. Refer to local criteria for referrals into follow up and Community Therapy Services.

Those babies at risk of developing significant postural difficulties affecting physical development including the list below should also be referred to the neonatal Physiotherapist and/or Occupational Therapist:

- talipes
- neuromuscular associated conditions
- altered tone
- hypoxic-ischemic encephalopathy
- diagnosis of or under investigation for syndrome or congenital anomalies
- intraventricular hemorrhage
- periventricular leukomalacia
- hydrocephalus

Position Management

Early optimal positioning is vital alongside the acute medical management of a baby. The use of intraventricular hemorrhage (IVH) care bundles promote practice in relation to handling and positioning of high risk preterm babies in the early stages following delivery (Razak *et al* 2023).

Please refer to your local policy.

Please note, positioning aids must only be used on monitored babies.

Please adhere to product care guidance and your trust infection prevention and safety guidelines in conjunction with any products used to support positioning.

See [Appendix A](#) and [Appendix B](#) for more detailed information on the different positions and potential considerations with postural management.

See [Appendix C](#) for an illustration of how to make an individualised nest using sheets or a thicker material item such as a rectangular incubator cover (preferably not towels as these do not hold shape as well as folded and pressed sheets)

Prone Management

Preparing prone Lying



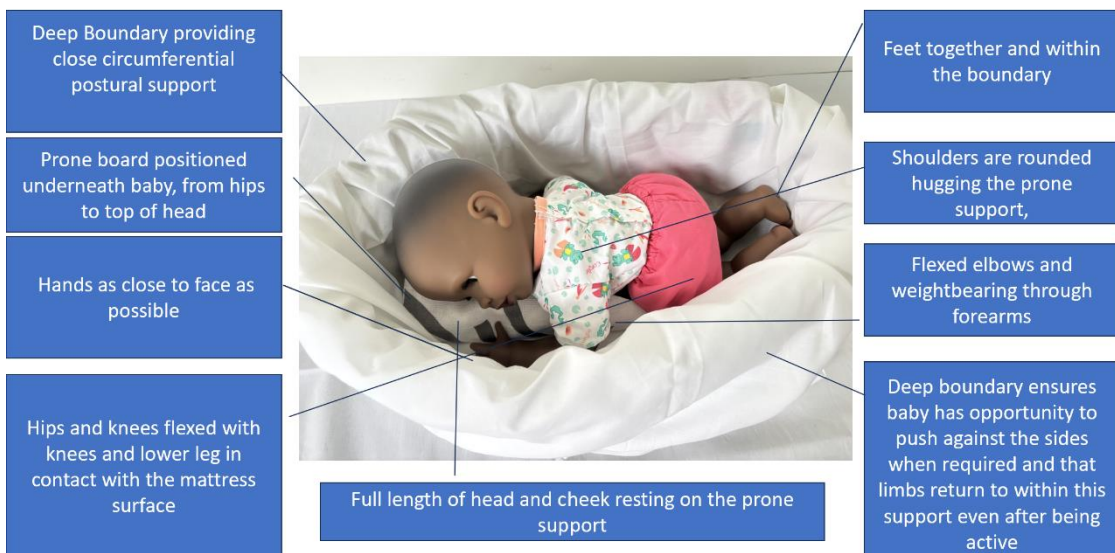
This picture demonstrates the position of a baby using a prone support. The dimensions of the prone (board/support) are individual to each baby.

- Length: from top of head (or above) down to hips/umbilical
- Width: No wider than the baby's trunk
- Depth: Shoulder to flexed elbow



This picture shows prone position using a prone support in a partially removed boundary to show without visual obstruction how it is used within a boundary

Prone Lying



Prone positioning can improve sleep quality and promote comfort, thus conserving energy (Bijl-Marcus et al [2020]).

Prone positioning can also have advantages with regards to improved ventilation and respiratory support (Warren and Bond [2010]).

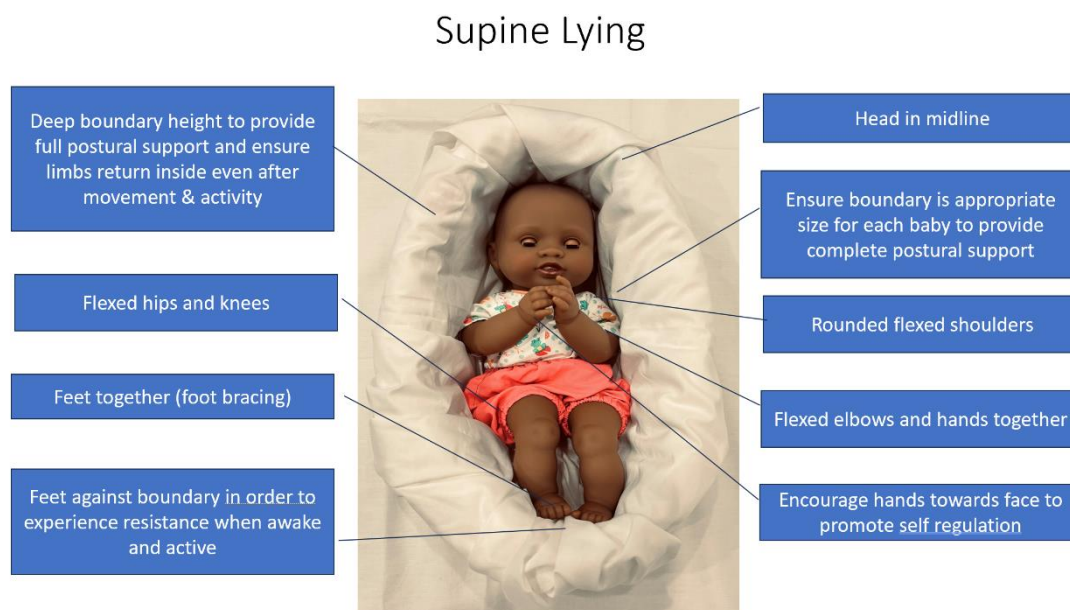
A prone board encourages the baby to come into a flexed midline position. This helps ensure the baby is in the optimum position and will distribute the exertion being put through joints and limbs. It also supports pointing the toes together as this helps with hip alignment. The addition of a nest provides the baby with the surrounding support required to provide full postural support and appropriate sensory stimuli.

Important to note that if baby:

- Has umbilical line(s) or chest drain(s)
- Has had a specific surgical intervention
- Is within the first hours of life and fits criteria for IVH neuroprotection management, (this recommends baby's head is kept in a neutral position, and in prone this is not achievable)

This list is not exhaustive but is likely to contraindicate the use of prone due to the increased risks they pose, if the baby was to be placed in this position. However, in specific cases, individual positioning management plans, discussed within a full MDT may need to be considered, to provide the optimum care for each baby at that point in time.

Supine Management



Supine supportive positioning can be achieved using readymade or handmade nests with sheets. See [Appendix C](#) illustrations for how to make a handmade nest with folded sheets.

As highlighted in the above model image, deep sided nests provide full and encompassing support.

Both hands and feet are supported to be close or touching each other. This promotes sensory and tactile feedback for neurodevelopmental purposes.

Upper limbs are supported in flexion and hands are across the chest aiding opportunities for self-soothing. Hips and knees, shoulders and elbows are all in flexion.

A knitted blanket over the top of the baby could be used to create circumferential support, this uses a flexible material allowing the baby to move naturally and have some resistance against the boundary (similar to the elastic properties and resistance of a baby moving against the mother's uterus wall)

N.B. Take careful care to ensure the baby is not lying on wires, creases in the fabrics/sheets, probes or IV lines.

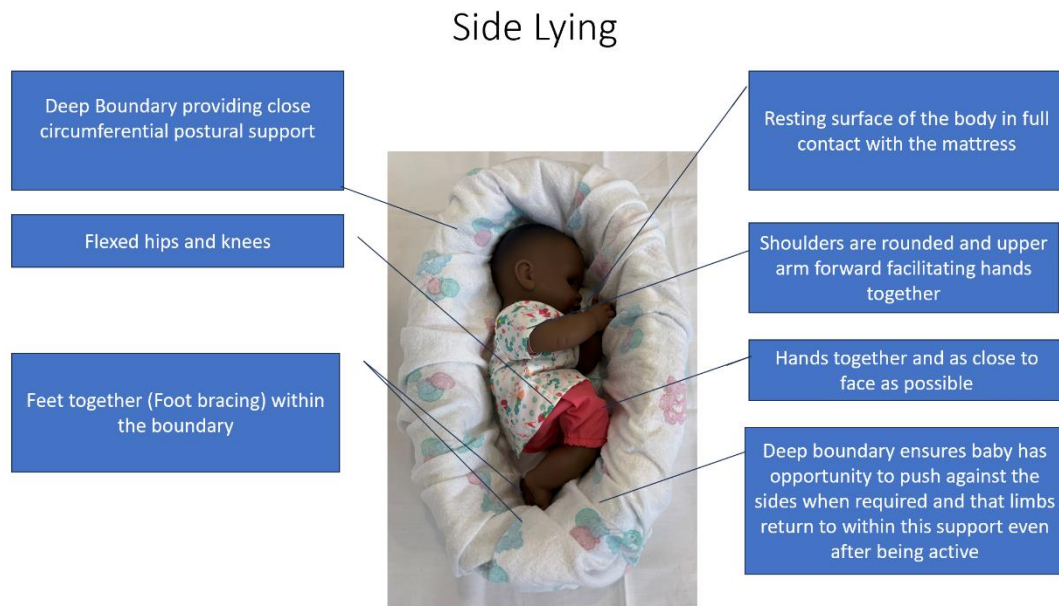


This demonstrates the use of a knitted blanket partially covering a baby, whilst in a boundary/nest in supine position (as mentioned above)

It is well secured under the edges of the boundary as this helps sustain the boundary walls, and its structural shape. It also provides the baby with some resistance when they are actively moving within the encapsulated area.

Knitted blankets have some dynamic stretch in the fabric and are not too stiff/resistant.

Side Lying



Side lying is the preferred position for extremely preterm babies as it reduces the impact of gravity on breathing and their posture, and it naturally facilitates the development of the baby's midline orientation and physiological flexion, whilst discouraging adducted 'frog' like positions with shoulders and hips. Warren and Bond (2010) identified that side lying promotes cardiorespiratory stability and encourages the development of self-comfort and self-soothing behaviours thus resulting in physiological control.

When a baby is in the side lying position, the boundaries must be of sufficient height to support the baby's whole spine/back and should be as high as the baby, when in side lying.

Supported Elevated Semi-Sitting Position

As babies approach term, they may developmentally be ready to spend a little time in a supportive inclined position. They may demonstrate longer awake times, early head control and have sufficient early trunk control/tone to cope with a short period (10-15 minutes determined by each individual baby) in a supported semi-sitting position e.g. in a reclined baby seat. This can assist in environmental and communication learning opportunities and is beneficial for overall neurodevelopment.

This can be achieved using items such as a baby chair/seat or being sat out with parents; ensuring full support is provided to the spine and head. It is important to monitor/supervise the baby in this position at all times and observe cues to identify signs of fatigue or stress such as loss of engagement, yawning or change in colour of skin.

Limit this type of activity to short periods of time to minimise the impact of elevated positions on respiratory function/effort and postural muscles of the trunk and neck in accordance with individual babies' skills. If baby falls asleep in this position, return to cot.

Supported in Skin-To-Skin Cuddle with Parent

It is important to highlight that this developmental activity between baby and parent can support different positions for the baby and is often associated with baby in a prone position, their chest to parents' chest. It should be encouraged as much as is safe and possible for the baby and their family. Refer to the EMNODN guideline for Skin-to-Skin/Kangaroo Care.

Removal of Boundaries

The relationship between the use of postural support and preparing for safe discharge home requires forward planning. Individual units should utilise local guidance for removal of boundaries. It is important parents are clear in their understanding of safe sleep advice and the differences between postural support for very premature babies and those at a more mature developmental stage preparing for discharge home.

Individualised management plans may be required for babies with complex needs such as Pierre Robin syndrome, Spinal Muscular Atrophy, Hypotonia or Hypoxic Encephalopathy, these babies may require a more extended period of developmental positioning and discharge planning should include postural management.

Sudden Infant Death Syndrome (SIDS) and Preparation for Discharge Home

Due to the association of the prone position with sudden infant death syndrome (SIDS), Garner and Golson (2011) recommend that all hospitalised babies whilst placed prone in an incubator or cot have continuous cardiorespiratory and saturation monitoring.

According to Bliss (2006), supported, nested prone, or side-lying positions, are unsuitable positions for a sleeping baby at home. It is important to make parents aware of the difference between their baby's sleep management on a neonatal unit and in the home setting. Guidance for safe sleeping practice at home should be discussed with parents and carers.

Further information is available on the lullaby trust website (2024) in relation to premature and low birth weight babies - [The Lullaby Trust - Safer sleep for babies, Support for families](#).

Positioning in Relation to Head Shape Development

Gilles, *et al.* (2012) recognised that factors such as the use of respiratory masks, increased duration in cots, sleeping state, the potential for parental anxiety and reduced confidence which may in turn reduce parental handling of a preterm baby, increase the susceptibility to cranial molding. Principles of Family Integrated Care (FICare) should be introduced to families as early as possible following delivery of their baby and embedded throughout all interactions but especially positioning and handling practices, to support & develop the Parents' confidence in handling, recognizing cues and getting to know their baby (Iffaender, *et al.* 2013).

Gilles, *et al.* (2012) recognised that the prevalence of symmetrical and asymmetrical head deformities in preterm babies can be reduced when using appropriate strategies for positioning to mi preferential head turning.

Positioning Audit

A positioning audit could be an accurate way to review current practice. This will help identify any training needs and can be repeated at regular intervals to measure the implementation of the positioning principles in practice.

See [Appendix D](#) for a quick use audit tool to review nest/boundary functionality in real time at the cot side.

See [Appendix E](#) for positioning assessment and observational audit tool examples.

Appendix A - Table: Key Factors of Positioning

	supine	prone	side lying
Head midline	x		x
Head side rotation		x	
Hands together	x		x
Hands to face	x	x	x
Feet together	x	x	x
Whole body midline alignment	x	x	x
Flexion at shoulders & hips	x	x	x
Aids to support position	Individualised Deep boundary/nest, Possible use of a, gel pillow	Individualised Deep boundary/nest, Prone/surfboard	Individualised Deep boundary/nest
Considerations	<ul style="list-style-type: none"> • Ensure the head is supported- quarter turns rather than full neck rotation is optional. • Deep nest sides enable hands to be supported in midline and near face, which assists baby develop self-regulatory skills. • For observational purposes baby is easily visible. • Supports safe sleeping practices. • If not adequately supported in flexion, body and limbs can be subjected to abducted postures and if consistent, this will lead to muscle imbalance, developmental delay, and unnecessary loss energy. 	<ul style="list-style-type: none"> • Ensure the head is supported on different sides. • When using surfboard ensure this is long enough for head to be supported at same level as chest. • Can be adjunct for supporting respiratory function and gastro-oesophageal emptying reducing gastric reflux and relieving abdominal discomfort. • Not suitable if umbilical lines present • Consider +ve V's -ve in relation to head rotation in babies <72 hrs of age & refer to your local Neuroprotective IVH care bundle management plan. 	<ul style="list-style-type: none"> • Ensure alternate sides are offered to avoid repetition one side • Easy to position baby's hands near face, and together, as gravity aids upper arm/hand to come forward. • Right side lying can assist gastric emptying. • Left side lying can reduce gastric reflux.

Appendix B - Advantages and Disadvantages of Positions Used in the Neonatal Unit

Prone Position

Advantages	Disadvantages
Beneficial for babies with respiratory compromise as it reduces work of breathing and energy expenditure which can improve oxygenation, ventilation (higher tidal volumes) and lung compliance.	Effects of gravity in this position push the limbs to the side, if not appropriately supported may cause hips rotation, frog' leg position and elevation of 'W' arm position.
Gastro-oesophageal reflux is reduced as gastric emptying is optimized.	The head must be at one side so the risk of bilateral head flattening, and facial molding is increased.
Promotes temperature stability and metabolic rate is reduced.	Contraindications may include: Umbilical lines Chest drains Surgical conditions Active cooling (also see earlier section in guideline)
Hand to mouth/face position, with one hand, facilitating ease of self-regulatory/calming behavior.	The baby cannot be positioned completely in midline (head, spine, and neck in alignment) which is necessary for physiological flexion.
Positioning a preterm baby into prone position will reduce the impact of gravity on their body as it is easier to position them in a less exposed posture.	Without appropriate support, a baby's head and neck will be over rotated, which can cause discomfort and muscle imbalance, affecting an individual's physical development in the long term.





Supine Position

Advantages	Disadvantages
Observation of babies and delivery of nursing care is optimised.	Less effective ventilation and increased energy expenditure often lead to higher oxygen requirements.
In supine, with head & body in midline position, gravitational pressure is more evenly distributed.	Head flattening will occur if the head is repeatedly/always in one or a repeated position.
Head can be supported in midline to provide an alternative to resting on either side, releasing the pressure off the sides and helping with the overall rounding shape and avoiding asymmetrical shape development. Care needs to be given in this position to help support the head in midline and support the chin from dropping onto the chest, maintaining an optimal airway	If not supported (at all, or with appropriate supports) limbs will be flat to the mattress and in abduction, resulting in potential muscle imbalance and poor coordination of motor activity, and long term possible further delay in achieving physical milestones.
This position is recommended to reduce the risk of sudden infant death syndrome and is the safest position for babies once they are home (Warren and Bond [2010]).	Gastric emptying can be delayed, and reflux could be more likely to occur.
Suitable for some medical reasons, for example if a baby has a chest drain in situ.	Babies have the least control over their movements and must use a lot of effort to work up against gravity.

Side Lying Position

Advantages	Disadvantages
Minimises hip and shoulder abduction and rotation and allows the baby to lie in a flexed position, with the closest resemblance to the fetal position in the womb.	Head flattening and asymmetrical facial features can be exacerbated as weight is always placed on the full side of the face.
Promotes midline symmetry and flexed position. Gravity assists the arms and legs towards midline alignment.	Care must be taken if a baby is muscle relaxed or has reduced independent mobility as their underlying limbs could be 'squashed' by their own body weight if they are not re-positioned regularly. This could lead to discomfort, pain and pressure sores.
Facilitates the baby to self-soothe as they are easily able to bring hands to face and hands together, helping babies feel more secure and develop self-regulation skills, meaning they are most likely to reach an awake-alert state and able to interact & bond with their parent/carer.	To comply with safe sleep guidance, this position is not suggested when monitoring is no longer in place and nearing discharge home.
Promotes cardio respiratory stability.	
Left side lying reduces gastric reflux (BAPM, 2021). "The stomach empties more quickly when lying on the right side but babies who suffer from gastro-oesophageal reflux may benefit from lying on their left side after feeding (Warren, 2020).	

Appendix C - Guide to Handmaking an Individualised Nest

<p>Step 1: Start with a rectangular sheet (or substitute quilted cover e.g. Incubator cover) and fold diagonally from corner to corner, making a triangle shape. Lay this on a flat surface & smooth out any creases.</p>	
<p>Step 2: Repeat step 1 with a second sheet. Lay this on top of the first sheet and again smooth out all the creases with your hands. The layers of the sheets ensure the nest will be firm and maintain its shape.</p>	
<p>Step 3: Make a fold along the long straight edge, the depth of which will be the depth of the sides of your nest, so this is dependent on the size of the baby for which you are making the nest. Press the fold* flat with your hands as this helps set the fold and gives it structure.</p> <p>*Folding rather than rolling creates deeper and stronger sides, which helps maintain the shape of the nest.</p>	
<p>Step 4: Repeat the folding and pressing format all the way down the triangular sheets, until you are at the bottom, paying particular emphasis to the pressing with your hands at each fold.</p>	

Step 5: When you have got to the bottom of the sheets (run out of material) you should be left with a flat long band of folded sheet, take the ends and push them into the folded material on each end to make a complete loop



Step 6: This is the basis for your nest/boundary, you can adjust the circumferential size to suit your baby's needs/size. Now place a sheet or muslin cloth gently over the top of the walls to line the nest.

Make sure the walls of the nest do not collapse, and the torsion of a top sheet stretched over the top does not create a 'hammock' effect. When baby is placed inside the nest, they should be in full contact with the mattress below.



Appendix D - FINE (Family and Infant Neurodevelopmental Education) Nest Test

Warren, (2010) recommended the use of a tool called “Nest test” - a document which can help as a check list to ensure a nest/boundary is meeting the needs of each individual baby. Acknowledgement to the FINE programme as authors.

THE NEST TEST		
FIT	Is the nest designed to fit the baby	
Size	Is it big enough so the baby isn't cramped but not so big that it fails to support the baby in a comfortable position?	
Support	Does it support the baby with head and trunk in good alignment. Does it help shoulders to be rounded forwards (avoiding retraction) and prevent splayed hips (abducted and externally rotated).	
Room to move	Does the baby have enough room to move so that they can adjust their own position.	
SELF-REGULATION	Does the nest facilitate the baby's own self - regulation efforts.	
Foot bracing	Does the nest provide a boundary that allows the baby to brace feet without sliding over the top.	
Able to reach midline	Does the nest facilitate movements towards and across the midline.	
UTILITY	Is the nest easy to adapt for practical purposes	
Adaptable	Can the nest be easily adapted when a position change is needed.	
Accessible	Can the nest be easily adjusted to allow access for caregiving and medical procedures.	

Appendix E - Assessment Tools

Positioning Observational Tool

Scoring tools are available to assess the position of a baby. This scoring system, suggested by the FINE Course (Warren [2010]) provides a score out of 12, indicating how well a baby has been positioned.

		Least Comfortable				Most comfortable
1	Agh..... Factor	Baby looks uncomfortable (Inc facial expression & colour) You feel you need to do something about it!	0	1	2	Baby looks relaxed, comfortable, cozy and content
2	Head & Trunk	Trunk arched/rotated/or curved with a. Head extended or b. Chin on chest or c. Head flat to side with twisted neck	0	1	2	Head and trunk in line, with head in midline, or $\frac{3}{4}$ to the side of head (no twisted neck)
3	Arms	a. Flaccid or stiff and stretched out or b. "W" position with shoulders retracted or c. twisted or trapped under body or bedding	0	1	2	All of the following a. Shoulders forward (protracted) b. Arms flexed; relaxed c. Able to reach mouth /face with ease
4	Hands	a. Fingers splayed or b. Hands tightly fisted c. Immobilized or restricted by clothing	0	1	2	One or more of the following: a. Hands relaxed, open or fingers softly folded. b. Hands together c. Touching head, face, mouth, own body d. holding onto something
5	Legs & feet	a. Flaccid, with straight or "Frog" leg posture (abducted and externally rotated at hips) or b. Stiff, straight legs with toes splayed or curled tight, and or pushing hard on bedding, turned outwards	0	1	2	In all positions a. Flexed legs with feet touching each other or part of their leg b. Able to reach boundary for bracing feet In prone knees should be tucked under body, feet angled inwards towards each other
6	Arousal	a. Agitated/jerky/jittery movements and/or b. Fussing/crying	0	1	2	a. Sleeping restfully or quietly awake a. Minimal smooth movements
	Total					(Max score 12)

Infant Positioning Assessment Tool (IPAT) (Kenner and Lott [2007])



















The IPAT assessment tool is one tool that may be used within neonatal units to evaluate posture at the head, neck, shoulders, hands, hips, knees/ankles/feet. The two point scoring system works by scoring a 2 for appropriate positioning and a 1 for an acceptable alternative positioning and a 0 for unacceptable positioning. It is suggested that each baby should be scored at the start of each shift and again when cares are complete.

- A total score of 12 is indicative of a perfect positioning assessment according to this tool
- A total score of 9-12 is acceptable
- A score of 8 or less indicates a need for repositioning

Patient's name: _____ Birth gestational age/corrected gestational age: _____

Clinician's name: _____ Date/time of assessment: _____

Infant position: ☐ Supine ☐ Side-lying ☐ Prone

Indicator	0	1	2	Score
Head	 Head rotated laterally (L or R) > 45° from midline	 Head rotated laterally (L or R) 30 - 45° from midline	 Head aligned (L or R) 0 - 30° from midline	
Neck	 Neck in hyperextension or hyperflexion	 Neck neutral	 Neck neutral, aligned, head slightly flexed forward 10°	
Shoulders	 Shoulders retracted	 Shoulders aligned, flat to surface	 Shoulders rounded forward towards midline	
Hands	 Hands away from body	 Hands touching torso	 Hands touching face	
Hips/pelvis	 Hips/pelvis abducted, externally rotated	 Hips/pelvis aligned but extended	 Hips/pelvis aligned and softly flexed	
Knees/ankles/feet	 Knees extended, ankles and feet externally rotated	 Knees, ankles, feet aligned but extended	 Knees, ankles, feet aligned and softly flexed	
12 = ideal cumulative score. 9 - 11 = acceptable cumulative score. ≤ 8 = need for repositioning.				Total cumulative score

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