

## Topic Expert Group: Care procedures

## Positioning support and comfort

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Target group
Infants and parents

## User group

Healthcare professionals, neonatal units, hospitals, and health services

### Statement of standard

All infants receive care that provides the individualised positioning support and comfort.

#### Rationale

Brain maturation, fetal and neonatal movements and posture contribute to shape joints and bones. For the infant the ergonomic conditions of the womb at the end of the pregnancy, its tightness and the neurologic maturation of the fetus' brain contribute to his flexed midline oriented posture and movements. The midline position is important for brain development and to achieve, in the future, important developmental steps. (1,2)

For the preterm infant these conditions are altered. After birth gravity induces an extended position, which challenges the infant's ability to achieve a flexed midline posture because of muscle weakness. This leads to uncoordinated movements and reduced ability to self-regulate. (1,3)

Therefore, the risk for muscular and skeletal imbalances is high, and attempts to self-regulate can be stressful and energy consuming. These may be minimised through optimal positioning and comfort, particularly during routine procedures and sleep. Supportive covering improves physiologic stability, encourages smooth movements, optimises behavioural organisation (e.g. sleep), and helps the infant move smoothly towards the midline, improving development and saving energy. In addition, this benefits thermoregulation by reducing exposed body surface. (3–6)

The need for postural support will change depending on gestational age, movement maturity, and clinical condition. When the infant had developed enough maturity of their muscle tone and spontaneous smooth movements to maintain a midline posture without support, positioning support should be gradually reduced and then removed. Infants will be gradually prepared to sleep on their back before discharge to prevent Sudden Infant Death Syndrome (SIDS). (7)

### Benefits

### Short-term benefits

- Improved physiologic and behavioural stability (1,3)
- Supported movement (1,3)
- Improved comfort and self-regulatory behaviour (1,3)
- Reduced stress for parents (1,8,9)





# Long-term benefits

- Improved skeletal development and alignment (10)
  Improved physiologic flexion of the body and postural development (10)

# Components of the standard

Component	Grading of evidence	Indicator of meeting the standard
For parents and family  1. Parents are informed about, trained, and engaged by healthcare professionals in individualised positioning support and comfort. (11)	A (Moderate quality) B (High quality)	Patient information sheet, training documentation
<ol> <li>Parents are informed by healthcare professionals about the safety of the supine position during sleep and reduced risk of Sudden Infant Death Syndrome (SIDS) at home. (7) (see TEG Follow-up &amp; continuing care and TEG Infant- and family-centred developmental care)</li> </ol>	A (High quality) B (High quality)	Clinical records, patient information sheet
For healthcare professionals  3. A unit guideline on positioning, comfort, and prevention of SIDS is adhered to by all healthcare professionals.	B (High quality)	Guideline
4. Training on how to position and use appropriate postural materials and strategies to prevent skeletal and muscular imbalance is attended by all responsible healthcare professionals. (7,10)	A (High quality) B (High quality)	Training documentation
For neonatal unit		
<ol> <li>A unit guideline for postural principles, positioning changes and comfort, avoiding motor and postural impairment is available and regularly updated. (4,8)</li> </ol>	A (Moderate quality) B (High quality)	Guideline
<ol> <li>Individualised care planning for positioning support and comfort is implemented. (4,8)</li> </ol>	A (Moderate quality)	Clinical records
7. Prior to discharge, all postural boundaries are removed, and infants are put to sleep in the supine position, unless otherwise indicated. (7)	A (High quality)	Guideline





Factorial		
For hospital		
<ol> <li>Training on how to position and use appropriate postural materials and strategies to prevent skeletal and muscular imbalance is ensured.</li> </ol>	B (High quality)	Training documentation
<ol> <li>Sufficient and adequate materials for position, postural and motor support are provided. (10)</li> </ol>	A (Moderate quality)	Audit report
<ol> <li>Specialist expertise in neonatal physiotherapy, occupational therapy and developmental care is available. (11)</li> </ol>	A (Moderate quality)	Audit report
For health service		
<ol> <li>A national guideline for the prevention of SIDS is available and regularly updated. (7)</li> </ol>	A (High quality) B (High quality)	Guideline

# Where to go – further development of care

Further development	Grading of evidence
For parents and family	
N/A	
For healthcare professionals	
<ul> <li>Healthcare professionals develop cross individualised care plans for optimal positioning and comfort with other professionals in multidisciplinary meetings. (1,12)</li> </ul>	A (High quality)
For neonatal unit	
<ul> <li>Carry out regular audits on the quality of positioning strategies and the motor development.</li> </ul>	B (Moderate quality)
For hospital	
N/A	
For health service	
<ul> <li>Support studies addressing the effects of different positioning strategies as well as materials on the development of the infant.</li> </ul>	B (Moderate quality)

# Getting started

# **Initial steps**





## For parents and family

- Parents are verbally informed about and engaged by healthcare professionals in individualised positioning support and comfort. (10,11)
- Parents are invited to observe the best positions for their infant. (1,3,11)

### For healthcare professionals

 Attend training on postural principles and the normal motor and skeletal development of infants.

### For neonatal unit

- Develop and implement a unit guideline on positioning, comfort, and prevention of SIDS.
- Develop information material on positioning, comfort, and prevention of SIDS for parents.
- Allow parents to bring their own materials (e.g. own blankets) to help optimal
  positioning support and comfort, as long as this is in line with the hospital
  guideline. (11)
- Organise training sessions for healthcare professionals without appropriate training. (see TEG Education & training)

### For hospital

• Support healthcare professionals to participate in training on postural principles and the normal motor and skeletal development of infants.

#### For health service

 Develop and implement a national guideline on positioning, comfort, and prevention of SIDS.

### Source

- 1. Als H, Lawhon G, Duffy FH, McAnulty GB, Gibes-Grossman R, Blickman JG. Individualized developmental care for the very low-birth-weight preterm infant. Medical and neurofunctional effects. JAMA. 1994 Sep 21;272(11):853–8.
- 2. Danner-Bowman K, Cardin AD. Neuroprotective Core Measure 3: Positioning & Handling A Look at Preventing Positional Plagiocephaly. Newborn Infant Nurs Rev. 2015 Sep;15(3):111–3.
- 3. Als H. A new era of newborn intensive care. In: The Psychological Development of Low Birthweight Children Advances in Applied Development Psychology. (Advances in Applied Development Psychology). p.341-388.
- 4. Bauer K. Effects of positioning and handling on preterm infants in the neonatal intensive care unit. In: Research on Early Developmental Care of Preterm Neonates. p. 39–42.
- 5. Ferrari F, Bertoncelli N, Gallo C, Roversi MF, Guerra MP, Ranzi A, et al. Posture and movement in healthy preterm infants in supine position in and outside the nest. Arch Dis Child Fetal Neonatal Ed. 2007 Sep;92(5):F386-390.
- Liu WF, Laudert S, Perkins B, Macmillan-York E, Martin S, Graven S, et al. The development of
  potentially better practices to support the neurodevelopment of infants in the NICU. J Perinatol Off
  J Calif Perinat Assoc. 2007 Dec;27 Suppl 2:S48-74.
- 7. Task Force on Sudden Infant Death Syndrome, Moon RY. SIDS and other sleep-related infant deaths: expansion of recommendations for a safe infant sleeping environment. Pediatrics. 2011 Nov;128(5):1030–9.





- 8. Bauer K. Interventions involving positioning and handling in the neonatal intensive care unit: Early developmental care and skin-to-skin holding. In: Research on Early Developmental Care for Preterm Neonates. John Libbey Eurotext; 2006. p. 59–64.
- Flacking R, Lehtonen L, Thomson G, Axelin A, Ahlqvist S, Moran VH, et al. Closeness and separation in neonatal intensive care: Closeness and separation. Acta Paediatr. 2012 Oct;101(10):1032–7.
- Sweeney JK, Gutierrez T. Musculoskeletal implications of preterm infant positioning in the NICU. J Perinat Neonatal Nurs. 2002 Jun;16(1):58–70.
- Davidson J, Aslakson R, Long A, et. al. Guidelines for Family-Centered Care in the Neonatal, Pediatric, and Adult ICU. Crit Care Med. 2017;45(1):103–28.
- 12. Symington A, Pinelli J. Developmental care for promoting development and preventing morbidity in preterm infants. Cochrane Database Syst Rev. 2001;(4):CD001814.

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