

# Supporting your pēpi/baby in our Neonatal Unit (NICU)

## Parent, Caregiver and Whānau information

**Neonatal Unit**

**Christchurch Hospital**



**Information taken from:**

The Neonatal Integrative Developmental Care Model: Advanced Clinical Applications of the Seven Core Measures for Neuroprotective Family-Centred Developmental Care.

L Altimier and R Phillips. 2016. In *Newborn and Infant Nursing Reviews*.

Shaker, C.S. (2017) Infant-Guided, Co-Regulated Feeding in the Neonatal Intensive Care Unit.

Part I: Theoretical Underpinning for Neuroprotection and Safety. *Seminars in Speech and Language* 2017;38:96-105

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Supporting your pēpi/baby's development (particularly brain development) is an important part of care in the Neonatal Unit. It is commonly referred to as Neuroprotective Care.

## There are 7 key principles of Neuroprotective Care





Whānau/family is the most important thing in the world of your pēpi.

Essential connections are made during pregnancy and when your pēpi is born. This is the beginning of parent-infant attachment which is essential for typical, healthy development.

Working together in partnership is the best way of caring for your pēpi and requires

- Respecting each other
- Information sharing
- Working together
- Confidence building
- Joint decision making

If everyone's focus is on the same goals, this will be best for protecting the brain development of your pēpi.



Your pēpi is used to being curled up. So in order to create a womb like environment, we use nesting to support and position your pēpi helping them feel safe and secure.

This is good for:

- Brain and nervous system development
- Development of muscles and bones
- Keeping blood pressure and heart rate stable
- Helping support more stable breathing
- Maintaining temperature
- Protecting skin
- Supporting good sleep
- conserving energy by keeping pēpi snug and secure

Pēpi who are well positioned tend to be calmer, require less medication and gain weight quicker.

To position your pēpi, we use:

- Nesting rolls
- Swaddling
- You can use your hands to hold pēpi when he/she is out of the nest or swaddle



Nesting rolls



Swaddling



Hands - to hold pēpi when out of nest or swaddle

Positions that your pēpi may be nested in the incubator are:



Side lying



On their back



On their front

- The other very important position used in NICU to support your pēpi is skin to skin on you





Sleep is very important for brain development, healing and growth for pēpi.

From about 28 weeks pēpi start developing more mature and recognisable sleep patterns.

### **There are 2 stages of sleep for infants:**

- *Quiet sleep* is when pēpi is deeply and restfully asleep. Quiet sleep is necessary to restore energy, and to maintain balance of the different systems in the body
- *Active sleep* is when pēpi may be restless but still settled and sleeping. Active sleep is important to process the sensations your body experiences and to make memories

### **Things that help preserve and safe-guard sleep in NICU are:**

- Skin to skin
- Comfortable, supportive positioning
- Managing sound and light in the environment
- Cue-based care (responding to when the pēpi wants to wake and wants to sleep)
- Not interrupting a sleeping pēpi unless advised or recommended.
- Pēpi may be gently woken from sleep to have skin to skin
- Maintaining natural day/night rhythms



In NICU we know that pēpi are exposed to unexpected and sometimes painful procedures - even routine cares can cause stress. These experiences can be managed so that they cause the least stress to the pēpi in this vulnerable early stage of their development.

Learning to read the cues of your pēpi allows you to understand how they are experiencing what is happening to them and how they are coping with it.

There are some specific care strategies that can be of benefit to your pēpi to reduce the stress that they experience.

These care strategies include:

- Skin to skin
- Smelling, hearing and seeing their parent
- Swaddling, containing or holding your pēpi
- Sucrose as a means of pain relief organised by the nurse
- Being able to smell breast milk
- Breastfeeding your pēpi (where appropriate) during procedures
  - Offering a taste of breastmilk - small drops on the pacifier
  - Sucking on a pacifier
  - Other medical pain relief can also be offered by the nursing/medical staff where necessary



The normal function of skin includes regulating temperature, storing fat, fluid balance, protection and sensation of touch and pain.

Messages about all of these are sent from the skin to the brain.

The skin of very preterm pēpi is immature, sensitive and requires extra care in the first 2 weeks. Your nursing team can help guide you to achieve the best possible outcome for the skin of your pēpi.

They will do this by supporting the humidity levels of your pēpi in an incubator, supporting with swaddling, dressing and bathing, using appropriate plasters, dressings and creams.

Skin to skin is also essential to give you and your pēpi some lovely positive touch experiences while in NICU.





Breastmilk is the best tolerated and most beneficial food for the gut of your pēpi, so is used as soon as possible and as much as possible.

- Breastmilk has many benefits for later outcomes particularly for preterm pēpi, so supporting you to start expressing breastmilk and continue breastfeeding is a major focus in NICU.
- When a mother's own breastmilk is not available or cannot be used, donor milk can be considered.
- Using a mother's own breastmilk to feed pēpi via a bottle can also be considered if parents do not wish to directly breastfeed.
- For parents wishing to breastfeed, bottles are best avoided until breastfeeding is established. Learning lots of new skills at one time is challenging for pēpi.
- Pēpi born preterm take longer to learn to feed than those born at term. This means the parent or caregiver feeding them needs to be aware of the cues and behaviours of their pēpi. This will help pēpi have a safe and effective feeding experience.

Watch your pēpi for 'stop' and 'go' signs:

These are the signs that indicate that your pēpi is happy to proceed with the feed or is signalling to you to pause or stop.



 signs include	 signs include
Awake and alert prior to the feed	Sleepy state or suddenly becoming sleepy on presentation of the bottle/ breast
Baby trying to find breast or bottle with their mouth	Fatigued or sleepy during the feed
Actively sucking on hands/ dummy	Becoming limp or floppy (particularly around the lower face)
Actively sucking on the breast/bottle	Not opening the mouth or fighting the breast/bottle
Maintaining an 'alert' state (awake and calm) during the feed	No observable effort to suck at the breast/bottle
Showing a steady suck, swallow and breathe rhythm	Arching or turning away from the bottle
'Self pacing' - pausing independently for breathing breaks	Gagging, coughing, colour changing, desaturating (low oxygen levels), or significantly increased or decreased heart rate (your medical team will be able to tell you what is 'significant' for your pēpi)
Only requiring brief pauses/ rest breaks during the feed	
Maintaining their normal colour	
Maintaining their oxygen saturations/level	Increased rate or noisy breathing

Shaker, C, 2017



We know that the NICU environment is unfamiliar for both you and pēpi. There are ways that we can minimise the effects that this environment has on the development of pēpi. It is important to keep whānau together as much as possible (we know this can be challenging) and as the parent/caregiver help you become involved in all suitable areas in the care of your pēpi.

## Hearing

### How is my pēpi developing

Hearing develops early during pregnancy.

Your pēpi will recognise and be comforted by your voice and is likely to be sensitive to loud noises.



### What we can all do to help

- Speak softly to your pēpi especially when under 32 weeks. Introduce more normal sounds and interactions as pēpi tolerates them.
- Avoid loud noises or speaking across the room
- Please try to avoid phone calls in the nursery and rather take calls out in the hallway
- Humming and quiet voices will help soothe your pēpi
- Cot sides also help to muffle the sound

## Vision

### How is my pēpi developing

The visual system is the last sensory system to develop.

The eyes of your pēpi may often be closed. In the early stages and when they are open they may be easily over stimulated by bright light.



### What we can all do to help

- Cover the incubator when possible.
- Protect the eyes of your pēpi from bright light
- Consider having the blinds closed when able
- Limit visual stimulation in the early stages as this energy is needed for growth
- Once pēpi is having more alert/eye opening times, enjoy short periods of face to face contact. Focal length in these early days is around 30-60cm.

## Smell

### How is my pēpi developing

Your pepi will recognise your smell and be sensitive to strong smells. Love hearts share smell between you and pēpi.



### What we can all do to help

- Avoid perfumes & strong smells
- Provide pleasant smells; and tastes of milk when appropriate
- Make sure sanitized hands are dry before putting them near the pēpi
- Use 'Cuddle Hearts' to share smell between you and your pēpi

## Touch & Soothing

### How is my pēpi developing

The earlier your pēpi is born, the more fragile their skin is. Pēpi may be sensitive to touch and may startle if touched suddenly.



### What we can all do to help

- Talk softly to your pēpi before touching or moving them
- Warm your hands before touching
- Watch for responses of your pēpi and respond to their needs
- Touch gently but firmly, so it is not ticklish
- Have a comfortable reclining chair for skin to skin

## Communication & Behaviour

### How is my pēpi developing

Te pēpi use body language such as movement, posture and facial expressions to tell us how they are coping. Sometimes, we need to pace what we are doing, slow down, pause to give them a rest or stop for a while to let them recover.



### What we can all do to help

Cue based care is about noticing what your pēpi is telling you. You can support the brain growth and development of your pēpi by keeping them as settled as possible. *Please refer to cue-based care/ state and behaviour on the following page.*

## Cue based care

Cue based care is about learning what your pēpi is telling you and responding to their needs.

For pēpi in NICU, it can be difficult to tell what state they are in and what they are trying to tell us due to medication, illness or prematurity.

Understanding the behavior of your pēpi can help them feel settled and enjoy their experiences with you and the environment.

### **We all want to learn to:**

- Recognise when they are genuinely asleep to help ensure they get as much uninterrupted restful sleep as possible
- Learn when your pēpi is settled or not and when they might need more comfort and what works for them
- What positions best suit your pēpi?
- What type and how much stimulation they enjoy
- Understand the signs that tell you when your pēpi is ready to feed, if they need a break, and when they have had enough. This will support successful feeding for your pēpi.

By understanding the cues of your pēpi you will be able to support them, based on what he/she is trying to tell you.

Pēpi behavior, also known as their 'cues' can be described as being like traffic lights. Your pēpi can tell you whether you may need to stop, pause or continue with what you are doing.

## ● Signs to tell you to stop

Your pēpi needs comfort or help

- Examples of behaviours: gagging, skin turning pale, mottled or red, coughing, jerky or stiff limb movements

Red  
light cues

## ● Signs pēpi is becoming tired or upset

- Examples of behaviours: crying, yawning, frowning, looking away, sneezing, sighing

Orange  
light cues

## ● Signs that your pēpi is comfortable, content or alert

- Examples of behaviours: bright eyes, smooth movements, calm and settled, looking at you or looking around

Green  
light cues

## Ways to help calm your pēpi:

- Talk in a soft, steady voice
- Humming or gentle singing
- Skin to Skin
- Gentle reading to your pēpi.  
Sharing books is a way for you to bond with your pēpi in the NICU. Hearing your voice brings your pēpi a sense of calm, comfort and familiarity. Your pēpi recognises your voice and would rather listen to your voice than any other sound.
- Hold your pēpi's hands and arms towards the middle of their body
- Place your hands on the body of our pēpi to contain them
- Swaddle with their hands near their face and mouth
- Rhythmical movements (e.g. stroking or very gently patting)



Parent / Pēpi name: \_\_\_\_\_

Here is a list of skills and knowledge you will gain in the NICU as you care for your pēpi. Please ask your bedside nurse or other staff member if you have any questions. Use this checklist to tick off skills as you learn.

Knowledge Skill	<input checked="" type="checkbox"/>
I understand the importance of appropriate hand hygiene using soap and water and/or alcohol rub	<input type="checkbox"/>
I have been orientated to the NICU environment and resources for parents (parent lounge, parent information folders, parent education programme)	<input type="checkbox"/>
Developmental Care	<input checked="" type="checkbox"/>
I can position my pēpi safely and can make his/her bed	<input type="checkbox"/>
I understand the behavior of my pēpi: alert, awake, asleep	<input type="checkbox"/>
I understand signs of stress or discomfort and how to help my pēpi cope with these	<input type="checkbox"/>
I understand how noise can affect my pēpi	<input type="checkbox"/>
I can provide skin-to-skin contact for my pēpi	<input type="checkbox"/>
Skills and knowledge	<input checked="" type="checkbox"/>
I can take the temperature of my pēpi and understand the normal temperature range	<input type="checkbox"/>
I can change the nappy of my pēpi	<input type="checkbox"/>
I can provide skin care, mouth and eye care	<input type="checkbox"/>
I feel comfortable taking my pēpi in and out of incubator/cot	<input type="checkbox"/>
I can bath my pēpi with special attention to water temperature, positioning and safety	<input type="checkbox"/>
I can dress my pēpi	<input type="checkbox"/>
I can weigh my pēpi and record it. I know how to re-zero the scales when necessary	<input type="checkbox"/>
I know what an 'event' is: apnoea/bradycardia/desaturation	<input type="checkbox"/>
checklist continues on the following page	

Developmental Care continued...	<input checked="" type="checkbox"/>
I know when I can use stimulation to help my pēpi with events and/or call for help	<input type="checkbox"/>
I can change saturation probe position	<input type="checkbox"/>
I can change chest leads	<input type="checkbox"/>
I can correctly give routine oral medications that my pēpi will be discharged on. I know I need to double check with the nurse	<input type="checkbox"/>
Expressing milk	<input checked="" type="checkbox"/>
I have been given explanations and parent information on expressing my milk	<input type="checkbox"/>
I can wash pumping equipment and sterilise it appropriately	<input type="checkbox"/>
I can label, store and transport my breastmilk from home properly	<input type="checkbox"/>
Breastfeeding/Non-nutritive sucking	<input checked="" type="checkbox"/>
I know about feeding cues, and the cues of my pēpi	<input type="checkbox"/>
I know how to position my pēpi at the breast for breastfeeding	<input type="checkbox"/>
I know to watch for signs of stress during feeding	<input type="checkbox"/>
I know that mobile devices are distracting when feeding	<input type="checkbox"/>
Additional Resources	<input checked="" type="checkbox"/>
I am aware of the neonatal website	<input type="checkbox"/>







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