

# POSITIONING DEVICES FOR USE IN THE NICU

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## Abstract

Two positioning devices made by Snugbuds Inc. of Onoway, Alberta have been found to be extremely beneficial for premature infants in the NICU at Sunnybrook and Women's College Health Science Centre in Toronto and for discharge home.

### 1) The Butterfly Pillow

This is a very useful device to promote a midline position of the infant in supine and side lying. By placing the infant on the support, it promotes head centering, upper extremity forward flexion thus bringing the hands to midline and slight flexion of the trunk. The pillow has been utilized for several problems.

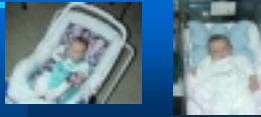
- Asymmetrical Head preference – Premature infants very often demonstrate a strong Right-sided head preference due to their prolonged stay in the NICU where they are most often placed on their right side and the majority of the care-givers are right-handed.
- Torticollis (positional or congenital). For those infants demonstrating a strong lateral pull with rotation of the neck due to repeated positioning or due to trauma of the Sternocleidomastoid muscle.
- Prevention of Plagiocephaly. This involves flattening of one side of the skull due to persistent pressure to one side of the head.
- Inhibition of head and neck hyperextension. Head and neck hyperextension is often seen in infants with Bronchopulmonary Dysplasia (BPD). The butterfly pillow can be used to inhibit this extension and promote elongation of the neck extensors.
- Inhibition of the Asymmetrical Tonic Neck Reflex (ATNR). In the neurologically impaired infant the ATNR can be quite strong and apparent very early. The pillow can assist in centering the head and in inhibiting the reflex while positioning the infant in the cot.
- After the placement of the VP shunt for hydrocephalus. Following the placement of the VP shunt, often the infants and the caregivers will turn the head away from the shunt thus promoting a strong head preference. The pillow will help centre the head and ease any pressure points over the shunt.

### 2) The Travelbud

This is a device used for upright supported sitting for the premature infant both in the Care by Parent Unit and for discharge home. It utilizes the basic principles of supported seating by stabilizing the pelvis, supporting an elongated trunk and providing some head support. It has been used in the unit for:

- Car Seat probing. According to APS and CPS guidelines, all infants in the Level 11 unit prior to discharge are probed in their car seat for oxygen saturation. It has been successful several times to assist the infant to pass the "Car Seat Test" and therefore allow discharge home. The parents are then encouraged to use the Travelbud at all times in the car seat and in any other device that is used for upright sitting.
- Reflux Positioning. The travelbud has been used in the unit in an infant seat for those infants demonstrating Gastroesophageal Reflux (GER). By supporting and maintaining an elongated trunk, therefore there is no additional pressure on the stomach and the infant can successfully spend some time in an upright sitting position.

Two positioning devices made by Snugbuds Inc. of Onoway, Alberta have been found to be extremely beneficial for premature infants in the NICU and for discharge home.



## THE BUTTERFLY PILLOW

- This is a useful device to promote a midline position of the infant in supine and side lying. By placing the infant in the centre of the pillow, head centering, upper extremity forward flexion with hands towards midline and slight trunk flexion is facilitated.

## ASYMMETRICAL HEAD PREFERENCE

- Premature infants very often demonstrate a strong head preference to the Right. Often this is due to their prolonged stay in the NICU where they are most often placed on their right side and the majority of the caregivers are right-handed. The pillow will assist in maintaining the head in midline.

## TORTICOLLIS ( POSITIONAL OR CONGENITAL)

- For those infants demonstrating a strong lateral pull with rotation due to repeated positioning or due to trauma of the Sternocleidomastoid muscle, the pillow will assist in midline positioning in supine. In side lying, a passive stretch of the involved muscle can be achieved.



## INHIBITION OF THE ATNR

- In the neurologically impaired infant, the Asymmetrical Tonic Neck Reflex ( ATNR) can be quite strong and appear very early on. The pillow can assist in maintaining the head in midline thereby inhibiting the reflex while positioning the infant in supine.

## THE TRAVELBUD

- This is a device used for upright supported sitting for the premature infant both in the Care By Parent ( Level II ) Unit and for discharge home. It utilizes the basic principles of supported seating by stabilizing the pelvis, supporting an elongated trunk and providing some head support.

## PREVENTION OF PLAGIOCEPHALY

- This involves flattening of the skull due to persistent pressure to one point of the skull. The pillow allows more even pressure on the skull while preventing persistent positioning of the head.

## CAR SEAT PROBING

- According to the guidelines of the APS and the CPS, all infants in the Level II unit prior to discharge are probed in their car seats for oxygen saturation. It has been successful in allowing the infant to " pass the car seat test" and therefore allow discharge home. The parents are encouraged to use the Travelbud for any upright supported sitting.

## INHIBITION OF HEAD AND NECK HYPEREXTENSION

- Head and neck hyperextension is often seen in infants with Bronchopulmonary Dysplasia ( BPD) as well as in the neurologically involved infants. The pillow can be used to inhibit this extension and promote elongation of the neck extensors.

## REFLUX POSITIONING

- The Travelbud has been used in the unit in an infant seat for those infants demonstrating Gastroesophageal Reflux (GER). By supporting and maintaining an elongated trunk, there is no additional pressure on the abdomen and therefore the infant can successfully spend some time in an upright sitting position.

## VP SHUNT PLACEMENT

- Following the placement of a VP shunt for hydrocephalus, often the infants and the caregivers will turn the head away from the shunt, thus promoting a strong head preference. The pillow will help centre the head and ease any pressure points over the shunt.



See \*Note: (below)



Poster displayed at the NICU Conference, Tampa FL Jan 2000. Reprinted courtesy of Sunnybrook and Women's College Health Sciences Centre, Toronto, ON.

\*Note: For testing purposes only, the chest clip shown here is used incorrectly to facilitate easy removal from the seat should there be a problem. \*

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