

This document was written by Linda Wolfson, Infant Feeding Advisor, Queen Mother's Hospital, Glasgow following a request for expert advice made by the UNICEF UK Baby Friendly Initiative sub-group on neonatal standards.

Suitable Indications for Dummy / Soother or bottle and teat use.

The use of dummies / soothers and teats has found to be potentially harmful during the establishment of breastfeeding^{1,2}. It is thought that the newborn baby imprints correct positioning and practices the skills of effective feeding³, if correctly attached at the breast. The concern is that the baby's imprinting will be interrupted in the early learning phase⁴.

The baby and breast work symbiotically to establish the milk supply and the ceiling for the potential lactation. If the baby and breast are not permitted to function as a symbiotic unit, one feeding on demand and the other matching production, then the potential for achieving adequate lactation may not be met⁵. It is thought that soother/dummy use, in response to feeding cues interrupts this. It is possible that mothers with abundant milk supply and very effectively feeding baby will not be affected by their use. The evidence for this is unclear. There is an associated teat and dummy use found in babies with feeding problems⁶. This may confuse research findings i.e. was the feeding problem caused by the dummy or the teat or used in response to feeding that as never quite right or effectively established?

What about the vulnerable sick or premature baby? It is possible to hyper stimulate the palate and make a baby suck before it would choose to^{7,8} and sometimes professionals and parents, in their hurry to get a baby home, will recommend using a teat;

- Can we be sure the mother will continue to express milk for very long?
- Will she be able to move towards feeding directly from the breast^{9,10}?
- Will the baby be able imprint both bottle and breastfeeding, which require two different sucking actions¹¹?

It has been established that preterm infants were easier to move towards breastfeeding if a cup rather than teat was used¹². This brings us to providing a

¹ Righard L, Alade MO (1997) Breastfeeding and the use of pacifiers. *Birth*, 24:116-120.

² Schubiger G, Schwarz U, Tönz O (1997) UNICEF/WHO BFHI: Does the use of bottles and pacifiers in the neonatal nursery prevent successful breastfeeding? *European journal of pediatrics*, 156: 874-877.

³ Woolridge M (1986a) The 'anatomy' of infant sucking. *Midwifery*, 2(4): 164-171.

⁴ Nowak AJ, Smith WL, Erenberg A (1994) Imaging evaluation of artificial nipples during bottle feeding. *Archives of pediatrics and adolescent medicine*, 148:40-42.

⁵ Victoria CG et al (1997) Pacifier-use and short breastfeeding duration: cause, consequence or coincidence? *Pediatrics*, 99(3): 445-453.

⁶ Barros FC et al (1995a) Use of pacifiers is associated with decreased breast-feeding duration. *Pediatrics*, 95(4): 497-499.

⁷ Martell, M., Martinez, G., Gonzalez, M., Diaz Rossello, J.L. (1993) Suction patterns in preterm infants. *Journal of Perinatal Medicine* 21(5): 363-69.

⁸ Siddell, E.P. and Froman, R.D. (1994) A national survey of NICUs: Criteria used to determine readiness for oral feedings. *Journal of Obstetric, Gynecological and Neonatal Nursing* 23:783-89.

⁹ Musoke RN (1990) Breastfeeding promotion: feeding the low birth weight infant. *International journal of Gynecology and obstetrics*, 31 (Suppl. 1): 57-59.

¹⁰ Riorden J. A (1991) *practical guide to breastfeeding*, Boston, Jones & Bartlett,

¹¹ Neifert M, Lawrence R, Seacat J (1995) Nipple confusion: toward a formal definition. *Journal of Pediatrics*, 126:S125-129.

¹² Musoke RN (1990) Breastfeeding promotion: feeding the low birth weight infant. *International journal of Gynecology and obstetrics*, 31 (Suppl. 1): 57-59.

balance view and not aim for one benefit at the cost of another unless this risk is seriously worth taking. It is necessary to be honest with parents about what we know what we don't and what may be flawed evidence. They need to discuss all options honestly and any available alternatives along with the pros and cons for each. They are then able to make a *fully informed choice*. The following guidelines are on balance, based on the best evidence and experience;

Suitable Indications for Dummy / Soother

- **Child who is an established dummy user, who is now unwell.**

Rationale; this is not the time to cause distress or potential suffering to parents and children. It may interrupt the development of a therapeutic relationship between the family and carer.

- **Fully informed parental choice (discussion should occur if this choice is having an impact on the child's well being i.e. failure to thrive or to the establishment of successful breastfeeding).**

Rationale; As professionals, we have a duty of care, which requires us to do the best for our patients. We also have professional policies and guidelines to follow. This forms the basis of the care and information we provide. Parents however are not required to follow recommendations or policies. Therefore our duty of care requires us to ensure damage limitation i.e. if the mother chooses to use a dummy then we need to give her the information she needs to ensure that her lactation is maintained as best it can be. It would be unprofessional not to inform parents of any action, which is causing or likely to contribute to the child's lack of well being.

- **Baby or child who will have *prolonged* (weeks or months) periods of nil by mouth or *prolonged* periods of naso / oro gastric feeding.**

Rationale: Health professionals need to be patient and prepare parents for the same to enable the baby to develop towards the point where it will breast feed. It cannot be forced or taught¹³, only practiced when the baby is ready. A child who is born prematurely or who is temporarily unable to suck because of illness should progress to cup feeding¹⁴ then breastfeeding to stimulate and practice oro motor skills and speech development rather than by use of a dummy. Advances in neonatal care and in particular, developmental supportive care¹⁵¹⁶ have encouraged premature babies to have sucking trainers¹⁷. It is thought that this will reduce oral hypersensitivity¹⁸,

¹³Meier P (1988) Bottle- and breast-feeding effects on transcutaneous oxygen pressure and temperature in preterm infants. *Nursing research*, 37(1): 36-41 Meier P (1994) Breast feeding the premature baby: a research review. *News brief*, 9(1): 2-5.

¹⁴Musoke RN (1990) Breastfeeding promotion: feeding the low birth weight infant. *International journal of Gynecology and obstetrics*, 31 (Suppl. 1): 57-59.

¹⁵Bernbaum, J., Pereira, G., Watkins, J., Peckham, G. (1983) Non-nutritive sucking during gavage feeding enhances growth and maturation in premature infants. *Pediatrics* 71: 41-45.

¹⁶Brace, M. (1978) Self-regulatory non-nutritive sucking by newborns before initial feeding effects upon initiation of breast feeding. Masters thesis (unpublished) University of Illinois: Chicago. Cited in: Anderson, G. (1986) Pacifiers: The positive side. *American Journal of Maternal/Child Nursing* 11(2): 122-24. 12(6): 43-48.

¹⁷Martell, M., Martinez, G., Gonzalez, M., Diaz Rossello, J.L. (1993) Suction patterns in preterm infants. *Journal of Perinatal Medicine* 21(5): 363-69.

¹⁸Pridham, KF. Nipple feeding the preterm infant with bronchopulmonary dysplasia. *Journal of Obstetric, Gynecologic, and Neonatal Nursing*, 147-154, 1993.

develop appropriate swallowing musculature¹⁹ and promote speech development²⁰. The evidence is not convincing but the costs, in terms of breastfeeding cessation may be real.

- **A child who requires *prolonged* hospital admission and whose mother is unable to stay and comfort him or her.**

Rationale: There is evidence that sucking as a comfort has analgesic effects^{21, 22}.

- **A child with abnormalities where breastfeeding or cup feeding is not possible but the child may be likely develop hypersensitivity of the oral cavity without oral stimulus.**

Rationale: Some of the babies who have long periods in hospital may have prolonged developmental and social delay²³. Some will never achieve effective breastfeeding. Some will have problems that make the pathway to breastfeeding challenging.

Suitable Indications for bottle and teat use.

- **Child who is an established bottle and teat user, who is now unwell.**

Rationale: this is not the time to cause for distress or potential suffering to parents and children. It may interrupt the development of a therapeutic relationship.

- **Fully informed parental choice (discussion should occur if this choice is having an impact on the child's well-being i.e. failure to thrive or to the establishment of successful breastfeeding.**

Rationale; As professionals, we have a duty of care, which requires us to do the best for our patients. We also have professional policies and guidelines to follow. This forms the basis of the care and information we provide. Parents however are not required to follow recommendations or policies. Therefore our duty of care requires us to ensure damage limitation i.e. if the mother chooses to use a dummy then we need to give her the information she needs to ensure that her lactation is maintained as best it can be. It would be unprofessional not to inform parents of any action, which is causing or likely to contribute to the child's lack of well being.

¹⁹ Bell, E.H., Geyer, J., Jones, L. (1995) A structured intervention improves breast feeding success for ill or preterm infants. *American Journal of Maternal and Child Nursing* 20(6): 309-14.

²⁰ Arvedson, J.C. and Lefton-Greif, M.A. (1996) Anatomy, physiology, and development of feeding. *Seminars in Speech and Language* 17 (4): 261-68.

²¹ Gunnar MR, Fisch RC, Malone S. The effects of pacifying stimulus on behavioral and adrenocortical responses to circumcision in the newborn. *J Am Acad Child Psychiatry* 1984; 23: 34-38.

²² Shah VS, Taddio A, Bennett S, Speidel BD. Neonatal pain response to heelstick vs venepuncture for routine blood sampling. *Arch Dis Child* 1997; 77: F143-F144.

²³ Rivkin MJ, Volpe JJ. (1993) Hypoxic-ischemic brain injury in the newborn. *Sem in Neurol.* 13:30-39.

Rivkin MJ. (1997) Hypoxic ischemic brain injury in the term newborn: neuropathology, clinical aspects, neuroimaging. *Clinics in Perinatology.* 24:607-627.

- **To provide barium or radio opaque contrasts where the child needs to like flat for.**

Rationale; There are no available studies, but in practical terms, this is an infrequent occurrence that would, in the absence of teat use, leave two other choices:

- insertion of a naso gastric tube (these are usually older babies and this may be distressing)
- or trying to cup feed a baby lying down which may be an aspiration risk.

A child with abnormalities or illness which have led to a severe delay in sucking ability.

Rationale: Some of the babies who have prolonged developmental difficulties²⁴ and physical abnormalities may never achieve effective breastfeeding. Some will have problems that make the pathway to breastfeeding challenging. A risk / benefit analysis and full discussion with the parents is appropriate.

- **Where a supplement is required for whatever reason and the mother is unable to provide adequate nutrition via cup feeding at home or makes a fully informed choice to use a bottle and teat.**

Rationale; Some parents have difficulty with the concept of cup feeding and this may interrupt their confidence in attaining this skill. This may be a baby who has poor feeding skills, who would benefit from practicing lapping and cup feeding. If the parents make a fully informed choice not to follow this option or do not manage it sufficiently to hydrate and nourish their child then a teat may be the only choice. However, in most situations parents can be taught to cup feed easily particularly if the teacher is confident.

²⁴ Kennedy, C. and Lipsitt, L.P. (1993) Temporal characteristics of non-oral feedings and chronic feeding problems in premature infants. *Journal of Perinatal and Neonatal Nursing* 7(3): 77-89.