



Keeping In the LLL Loop

La Leche League Canada
www.LLCC.ca

Volume 6, Issue 1
February 2010

Taking Another Look at Pacifier Use, Breastfeeding and SIDS

Pacifiers. Dummies. Binkies. Some parents swear by these little plastic items, others hate them. They are controversial among health professionals as well.

The American Academy of Pediatrics, for example, recommends the use of infant pacifiers for the first year of life in an effort to reduce the risk of SIDS.

The Canadian Pediatric Society is more cautious in this position statement:

The decision to use pacifiers in infants and children remains controversial and an individual choice for today's parents. Many experts agree that pacifiers may be associated with otitis media, early weaning and dental problems, but the nature of this association along with the scope of this negative impact is still unclear. Pacifier use may be protective against SIDS, which is significantly consequential, and indeed further research is needed to validate this claim. Due to the lack of strong evidence, either for or against the use of pacifiers, selective use and safe use cannot be over-emphasized to those who choose them. Paediatricians and other child health care providers must be vigilant in advising parents on the appropriateness of pacifier use ([see parent handout](#)) and be aware of the available evidence to date to support this advice.¹

Overall, the CPS appears to be more supportive of pacifier use than not. These recommendations are largely based on four research studies that found that babies who died of SIDS were less likely to have been given pacifiers on the night they died than a control group of babies.²

Some experts take another view of SIDS and pacifier use. Dr. Brian Palmer, a dentist, presented a session at the May 2009 GOLD conference entitled *The Myth that Pacifiers reduce the Risk of SIDS*. He has analyzed the research used to support the AAP recommendation and explained that, in his opinion, the recommendation is flawed.³

Dr. Palmer has been concerned about the effect of pacifier use on jaw and dental development for some time. He believes that infant pacifier use leads to the development of narrow dental arches and high palates – issues the CPS mentions in their guidelines as well.

However, Dr. Palmer is also of the opinion that pacifier use may actually *increase* the risk of SIDS. He notes a 2003 study that found that 77% of SIDS cases habitually used a soother.⁴

Inside this Issue

| | |
|--------------------|---|
| Breastfeeding Quiz | 4 |
| News from LLLC | 7 |



Taking Another Look at Pacifier Use, Breastfeeding and SIDS (continued)

One of the first points that Dr. Palmer emphasizes in his presentation is that improved reporting methods have done much to reduce the incidence of SIDS. In other words, SIDS incidence may appear to have gone down, not because of the effect of recommendations such as sleeping positions or location or use of pacifiers, but because of the fact that experts are better able to find explanations for what might once have been termed ‘unexplained infant deaths’.⁵

He then goes on to explain that SIDS is caused by a number of factors related to the maturational process, medical conditions and environmental factors. Dr. Palmer suggests that the starting point in developing recommendations should be the normal biology of infant growth and development. What is the normal sleep pattern of an infant? What does the normal development of a human infant tell us about true SIDS cases, i.e. those cases where other factors, such as overlying, smothering and pre-existing medical problems, have been removed from the analysis?

Dr. Palmer points out that studies have found that the “Maturational descent of the epiglottis was found to occur between the 4th and 6th months of age and that this period interestingly coincides with the peak incidence of SIDS which occurs between the 3rd to 5th months of age.”⁶

Dr. Palmer makes the following points about the development of the epiglottis:

- As the epiglottis descends, the tongue falls back into the mouth to its normal adult position.
- The descent allows humans to speak and only occurs in humans.
- However, the descent makes the acts of breathing, eating and drinking more complex.
- Once the epiglottis descends, the airway is less protected from obstruction.

Since the peak incidence of SIDS occurs between the 4th and 5th months of life when the infant’s epiglottis is descending, Dr. Palmer wonders if the infant brainstem is mature enough to respond to an airway obstruction.⁷

Dr. Palmer then provides an analysis of how the use of pacifiers can affect the normal development of the infant’s mouth, chin, and tongue since the baby must adapt to anything firmer than the mother’s breast. He suggests that pacifier use can prematurely separate the epiglottis and soft palate thus making it possible for a blockage to occur in the area of the soft palate and tongue base. If an infant does not respond to an airway blockage, SIDS can occur.

Dr. Palmer goes on to review and suggest flaws in the following two assumptions on which the AAP policy recommendation is based:

1. The AAP belief that pacifiers pull the tongue forward is based on these comments from four sources:

- “presumably the dummy pushes the tongue down”
- “could probably prevent the seal”
- “a dummy might prevent”
- “might keep the tongue forward”⁸



photo © M. Peddlesden, 2007, used by permission

Dr. Palmer believes these presumptions are incorrect and refers to a 2006 study that found that bottle-feeding causes the tongue to retract.⁹ He concludes that since pacifier nipples resemble bottle nipples, they would similarly cause the tongue to retract.

Taking Another Look at Pacifier Use, Breastfeeding and SIDS (continued)

2. The AAP background to the policy suggests that the pacifier opens the airway while sleeping. Yet most pacifiers fall out within 30 minutes of the infant falling asleep and most SIDS occurs in the late hours of the night during REM sleep.

Dr. Palmer believes that the recommendation to use pacifiers, in an effort to lower the incidence of SIDS, may well do more harm than good and should be retracted. This analysis can be part of the available evidence that is provided to parents to assist them in making decisions about the use of pacifiers.

Both the CPS and the AAP recommend that a pacifier not be offered until breastfeeding is well established, which may take four to six weeks, or longer in some cases. Pacifiers given earlier than this can interfere with breastfeeding and lead to early weaning.¹⁰

Clearly, babies are born expecting to suckle at their mothers' breasts, and the normal development of the baby is designed around this – not sucking on a hard plastic nipple. At present, we have no studies comparing babies who sleep close to their mothers and nurse on and off through the night with babies who sleep alone but have a pacifier. Since breastfeeding is the biological norm, this would provide an appropriate baseline for SIDS research.



photo © C. Morgan, 2009, used by permission

References for: Taking Another Look at Pacifier Use, Breastfeeding and SIDS

1. <http://www.cps.ca/english/statements/CP/cp03-01.htm>

2. Mitchell EA, Taylor BJ, Ford RPK, et al. Dummies and the sudden infant death syndrome. *Arch Dis Child* 1993;68:501-4.

Arnestad M, Andersen M, Rognum TO. Is the use of dummy or carry-cot of importance for sudden infant death? *Eur J Pediatr* 1997;156:968-70.

L'Hoir MP, Engelberts AC, van Well GTJ, et al. Risk and preventive factors for cot death in The Netherlands, a low incidence country. *Eur J Pediatr* 1998;157:681-8.

Fleming PJ, Blair PS, Pollard K, et al and the Confidential Enquiry into Stillbirths and Deaths in Infancy/Sudden Unexpected Deaths in Infancy Research Team. Pacifier use and sudden infant death syndrome: Results from the Confidential Enquiry into Stillbirths and Deaths in Infancy/Sudden Unexpected Deaths in Infancy case control study. *Arch Dis Child* 1999;81:112-6.

3. http://www.brianpalmerdds.com/three_presentations/Pacifier-SIDS%20only%20B&W.pdf

4. McGarvey C et al. Factors relating to the infant's last sleep environment in sudden infant death syndrome in the Republic of Ireland. *Arch Dis Child*. 2003 Dec;88(12):1058-64.

5. The Changing Concept of Sudden Infant Death Syndrome: Diagnostic Coding Shifts, Controversies Regarding the Sleeping Environment, and New Variable to Consider in Reducing Risk. *Pediatrics* Nov 2005;116(5):1245-55.

6. Sasaki CT, Crelin ES et al. Postnatal Descent of the Epiglottis in Man, March 1977, *Arch Otolaryngol*, Vol. 103, 169-171.

7. Crelin, ES. *The Human Vocal Tract*, 1987. Vantage Press ISBN:0-533-06967-X.

8. L'Hoir MP, Engelberts AC et al. Risk and preventive factors for cot death in the Netherlands, a low-incidence country. *Eur J Pediatr*. 1998 Aug;157(8):681-8.

Mitchell EA, Taylor BJ, et al. Dummies and the sudden infant death syndrome. *Arch Dis Child*. 1993 Apr;68(4):501-4

Cozzi F, Albani R, Cardi E. A common pathophysiology for sudden cot death and sleep apnoea. "The vacuum-glossoptosis syndrome". *Med Hypotheses*. 1979 Mar;5(3):329-38

Swift PG, Emery JL. Clinical observations on response to nasal occlusion in infancy. *Arch Dis Child*. 1973 Dec;48(12):947-51.

9. Cristiane F. Gomes et al. Surface electromyography of facial muscles during natural and artificial feeding of infants. *J Pediatr* (Rio J) 2006 March-Apr;82(2):103-9.

10. Mohrbacher, N. and Stock, J. *The Breastfeeding Answer Book*, 3rd Edition: La Leche League International, 2003 p. 43

La Leche League Canada News Update

Updated Publications!!

The LLLC leaflet team is happy to announce that four new leaflets (single sheet, double sided format) are now available. Three have been revised and updated:

- *How to Know Your Breastfed Baby Is Getting Enough Milk (No. 457)*
- *Establishing Your Milk Supply (No. 469)*
- *Preparing to Breastfeed (No. 481)*.

The fourth leaflet is brand new:

- *How Fathers Help Breastfeeding Happen (No. 430)*

Written with the input of fathers, the new leaflet offers suggestions of how fathers can support breastfeeding mothers. At present, a limited number of paper copies are available in Nova Scotia, thanks to a grant from the Capital District Health Authority Baby Friendly Initiative™ Committee; plans are under way to make them available electronically. The leaflet team continues to revise our leaflet collection and will have more ready in the near future.

Updated Website!!

New website coming soon: www.LLLC.ca will soon have a new look. We anticipate the launch of the new and improved website in March 2010.

BREASTFEEDING QUIZ

By Nicola Aquino, Professional Liaison Administrator, La Leche League Canada

1. Initiating breastfeeding in a way that takes into account baby's natural instincts and also promotes a good latch and frequent feedings can be accomplished by:
 - a) Having mother place baby in cradle hold position and start breastfeeding as soon as possible after birth
 - b) Placing baby on mother's abdomen and leaving mother and baby to interact while baby navigates his way to the breast and spontaneously latches on.
 - c) Teaching mother a variety of ways to hold the baby
 - d) Taking baby to the nursery, cleaning him up, giving him a bottle of glucose-water and allowing mother some time to recover from the birth
2. Why is milk white?
 - a) Calcium
 - b) Casein
 - c) Whey
 - d) Antibodies
3. What is the average percentage of a drug administered to a lactating woman that actually gets to the breastfeeding baby?
 - a) 0.01%
 - b) 0.1%
 - c) 1.0%
 - d) 10%
4. A mother calls on the telephone to ask for breastfeeding help. She is nursing her seven day old baby every 3-4 hours for at least an hour each time. The baby passed one black tarry stool yesterday and one today; he's had "a couple" of wet diapers each day. Your FIRST recommendation is to suggest to the mother that she should:
 - a) Relax; baby's meconium stools will change soon.
 - b) Have her baby seen by a physician as soon as possible.
 - c) Begin supplementing with formula right away.
 - d) Try switch nursing and add in at least one more feed per day.
5. Colostrum is yellow because of:
 - a) Protein/Immunoglobulins
 - b) Something mother has ingested
 - c) Beta Carotene
 - d) Hormones
6. Why would one not rely solely on an official manufacturer's monograph (drug information) to check for safe drug use in a breastfeeding mother?
 - a) the numbers of women in the studies are too low for the data to be of significance
 - b) drug manufacturers do not have to do studies on a drug's appearance in breastmilk for a drug licence in order to sell their product in Canada
 - c) the monographs are not updated regularly to include published data in the literature on appearance of a drug in breastmilk
 - d) a and b

You have our permission, and in fact, are encouraged, to reproduce our newsletter quizzes for educational purposes. We hope you will find them useful for staff training or self-study! If you have comments on this quiz or suggestions for future quizzes, please send them along to pat.millar@ns.sympatico.ca.

Thanks!

7. A Mother whose milk production is too low for the healthy growth of her baby should:
 - a) wean from the breast and feed formula exclusively
 - b) be supported to combine breast and formula feeding, using breastfeeding supportive techniques
 - c) stop putting baby to breast and pump exclusively, combining milk and formula in a bottle
 - d) be told to put baby to breast more often and avoid all artificial feeding until mother's production increases

8. A supplement can be given:
 - a) before or after breastfeeding, using a cup, spoon or other non-nipple method
 - b) using a nursing supplementer at the breast
 - c) using paced feedings from a bottle
 - d) all of the above

9. Because colostrum is produced in small amounts:
 - a) babies will not get enough to sustain them and will need supplements
 - b) mothers will get sore nipples if they feed the baby too often
 - c) baby will nurse frequently and this will help to establish a good milk supply
 - d) it is not necessary for a baby to receive it

10. For an asymmetric latch, expect to see:
 - a) Nose and chin buried in breast
 - b) Lips flanged, no areola visible
 - c) Lips pursed or puckered, areola more visible at top than bottom
 - d) Baby's head tilted back slightly, chin buried in the breast, lips flanged out, nose clear of breast, more of areola covered by bottom lip than top

La Leche League Canada's Health Professional Seminar Series 2010

Preserving the Simplicity of Breastfeeding in a Complex World
with speaker **Dr. Kathleen-Kendall Tackett**

May 5, 2010

Victoria Inn, Brandon, Manitoba

Four more seminars with **Karen Gromada** (author of *Mothering Multiples: Breastfeeding and Caring for Twins or More*) are being planned for this year in these communities:

Oshawa, Ontario (June 2010)

Edmonton, Alberta (October 2010)

Niagara Region, Ontario (October 2010)

Ottawa, Ontario (October 2010)

Watch this space for more details about La Leche League Canada's Health Professional Seminars in 2010!

Contact Pat Millar at pat.millar@ns.sympatico.ca to be added to our HPS mailing list.

Answers to Breastfeeding Quiz

1. b) Babies have inborn instincts and skills that help them breastfeed right from birth. Researchers have repeatedly shown that babies born after an unmedicated birth are capable of self-attaching to the breast, although this can take some time: on average 45-60 minutes, but sometimes up to 2 hours. Babies who are showing effects from medications/interventions during labour and delivery still benefit from being held enface skin to skin, although self-latching behaviours may be modified or absent. If separation of mother and baby is medically required, the mother should begin hand-expressing colostrum as soon as possible and should continue expressing as frequently as she can. If the baby can't self-attach because of medication from labour, if he needs immediate care, or there is separation, self-attachment behaviour continues to be seen for several weeks post partum; the mother can hold the baby on her chest and allow him to self attach once she and the baby are together and ready. Newman, J. and Pitman, T. *The Latch and Other Keys to Breastfeeding Success*, Hale Publishing, 2006.
2. b) Casein, the milk protein that is rich in calcium makes the milk white. Whey looks clear or watery. Many of the immunoglobulins and protective proteins are in the whey portion of milk. Human milk is about 80% whey and 20% casein; it moves through the baby's digestive system quickly. Cow's milk is about 80% casein and forms big curds in the calf's stomach which are very slow to digest. Cow's milk is cloudy and chalky because it's higher in casein. The casein can be made into cheese. Smith, L. *Coach's Notebook* Jones and Bartlett Publishers, 2002. p. 34
3. c) "The relative infant dose in the vast majority of drugs is (less than one percent) <1%." Hale T. *Medications and Mothers' Milk*, Pharmasoft: Amarillo Tx. 2008 p 9
4. b) A baby should pass meconium, the black tarry first stool, within the first 48 hours after birth. As mother's milk comes in, around day 3, he should start having 3-5 bowel movements every 24 hours, each the size of a \$2 coin. After a brief transition, they should become yellow and seedy by day 5. By day five, babies should also be having 5-6 very wet, heavy diapers per day. A baby who is still passing meconium on day 7 and is not stooling several times per day requires urgent medical assessment. Mohrbacher, N. and Stock J. *The Breastfeeding Answer Book*, 3rd Edition. Illinois: La Leche League International, 2003. p. 150
Breastfeeding Committee for Canada Checklists and Appendices, Appendix 5: "Initiation of Lactation: Anticipated Behaviours and Feeding Patterns" <http://breastfeedingcanada.ca/pdf/webdoc55.pdf> (p. 13)
5. c) Because it contains large amounts of beta-carotene. Beta-carotene is an anti-oxidant and protects the gut from many diseases. Beta-carotene containing vegetables have high amounts of vitamin A and have been found to reduce the risk of cancers of the digestive system in adults. Smith, L. *Coach's Notebook* Jones and Bartlett Publishers, 2002. p. 33
6. b) There are no requirements for testing breastmilk for the presence of drugs. http://www.hc-sc.gc.ca/dhp-mps/prodpharma/applic-demande/pol/women_femmes_pol-eng.php
7. b) Any feeding of human milk, ideally from the breast, is better than none. When a baby can effectively suckle, a nursing supplementer will optimize mother's time as well as her potential supply. If a baby cannot yet breastfeed effectively, then alternatives, whether cups, feeding tubes or bottles need to be a positive experience for mothers. Bottle-feeding is familiar to many mothers and some see breast and bottle as an "all or nothing" choice. However, with appropriate teaching and support, they can learn to bottle feed in a manner that lessens interference with breastfeeding. Generally, no pump is as effective as a baby, especially after the first month postpartum, so exclusive pumping will not remove as much milk as a healthy baby, potentially

decreasing mother's production over time. Depending on the cause of the low milk production, simply increasing stimulation by more frequent breastfeeding may not be sufficient to increase her production; this may put the baby's health at risk. Maturity and time can change the baby's needs. As the baby starts solids, the formula supplement can be decreased, while breastfeeding continues. West, D. and Marasco, L. *The Breastfeeding Mother's Guide to Making More Milk*, McGraw-Hill, 2009. p. 48-51. Similar information available at: <http://www.bfar.org/bottlefeeding.pdf>

8. d) All answers are correct; the best method of delivering the supplement will depend upon what works for a given dyad. In some cases, giving a small amount of supplement before the nursing session means the baby is better able to focus on coming to the breast because he is not screaming and hungry. Having staved off the initial hunger, baby may be more willing to work at getting the latch correct and/or sucking until a let down. The baby then equates satiation and comfort with the breast, and will probably fall asleep there, rather than fussing at the breast and receiving satiety from the formula at the end. Each of the three methods of giving the supplement has pros and cons. Paced feeding from a bottle can actually enhance breastfeeding; using a nursing supplementer allows the baby to receive the supplement while breastfeeding and, for a short time, cup or spoon are effective. West, D. and Marasco, L. *The Breastfeeding Mother's Guide to Making More Milk*, McGraw-Hill, 2009, Chapter 4 "Supplementing Without Decreasing Your Milk Supply". Also available at: <http://www.bfar.org/Bottle-First.pdf>
9. c) "Lactation is a robust process that is organized to meet the nutritional, emotional, developmental, and health needs of the infant and young child. Breastfeeding is a dynamic coordination between the changing needs, stores, and capacities of a child and the delivery of appropriate nutrients, immune factors, and physical contact necessary to support the normal growth and development of a new person." Walker, M. *Breastfeeding Management for the Clinician: Using the Evidence*, Jones and Bartlett Publishing, 2006 p. 80
10. d) This is the most accurate description of an asymmetric latch, which many mothers find effective. However, appearance is not everything. If a mother is having pain then there is something wrong, no matter how perfect it may look. On the other hand, if the mother is pain free and there is good milk transfer, there is no rush to change the positioning, no matter how wrong it looks. However, mother should know that ensuring a good latch will avert potential problems as the baby matures and will ensure continued effective milk transfer.

La Leche League Canada is a non-profit organization and a registered Canadian charity.

La Leche League Canada is an affiliate of La Leche League International, governed by an elected Board of Directors who work with approved by-laws and policies to steer the work of the organization across Canada and to ensure consistency at all levels. La Leche League has a registered office at P.O. Box 700, Winchester, Ontario, K0C 2K0. Telephone: 613-774-4900.

