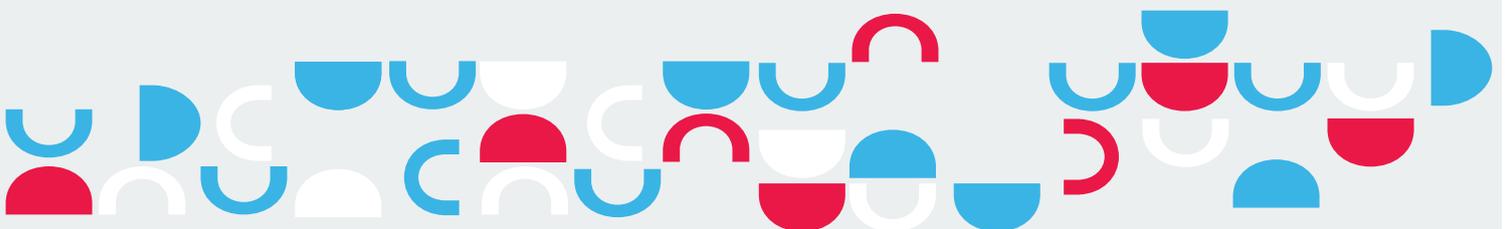


MUNCHEE



Evidence based guidelines for safer use of pacifiers

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No Judgement

At Munchee we love our products and love what we do. Most of us at team Munchee are also parents, making us realists as well as idealists.

Being realists, we know the struggles and trials that parenting brings. Sleeping, settling, teething and all the key "milestones" that should be reached at the correct time. Couple that with running a household and perhaps a job and we fully understand how challenging parenting babies and the very young can be.

We also totally understand the benefits parents find in using a pacifier to help soothe a baby. Many parents find a pacifier especially useful when they have other older children they're caring for, children are sick or difficult settlers and just for the sake of sleep and sanity!

But what is the big deal about pacifiers? Why do we hear some people say they are not good for babies and young children and why aren't they? Is it just old wives' tales?

At Munchee we took this question seriously and looked thoroughly into the science of pacifier use to find out what is really going on. As a result, we have developed our guidelines for safer use of the pacifier.

In doing this we want to frame that we are in no way judging any parent who is using or has used a pacifier at any age or any stage for whatever reason. What we do want to clarify, via the published literature, the best possible recommendations we can to help you make an informed choice.



Pacifier Guidelines

As development in the early stages is rapid and highly changeable we have divided guidelines into age categories:

0-6 months

Suck reflexes are predominant at this age making it the most flexible time for using a pacifier to soothe

- Duration of use is the key here. If using the pacifier as a settling tool, try to ensure it's taken out once the baby is calm and/or asleep
- Frequency is also important. If possible use the pacifier the least amount of times per day you can and use other strategies such as rocking, singing, skin to skin and baby slings to settle young babies
- Excessive frequency and duration has been shown to potentially interfere with breastfeeding. If you suspect this may be occurring check with a lactation consultant
- Premature babies need to suck a pacifier to keep their suck muscles and reflexes strong for breastfeeding later and to assist delivery of nutrition
- Research shows that mothers suffering post-natal depression can get relief by their babies using pacifiers to settle and should not be discouraged from using pacifiers
- Pacifiers have also been shown to play a role in the prevention of SIDS although the mechanism is not fully clear.

6-12 months

- At this age babies will start to transition into solids and therefore from sucking to chewing
- This means during the time the newborn transitions into an older infant there is a good opportunity to reduce or cease pacifier use
- Slowly reducing both duration and frequency are the key to reducing use for this age
- Begin by using the pacifier less often (frequency) for shorter times (duration). If your child has been using the pacifier for long periods try by reducing the time spent sucking before reducing the frequency
- Replacement play toys and chew toys can be useful distraction aids at this age to help babies transition to shorter suck duration, delaying pacifier time as long as possible





12-18 months

- Most children will be fully weaned by this time and suck reflexes and muscle patterns coupled with them are no longer required
- Prolonging pacifier sucking at this age can interfere with this transition to full solids and delay chewing reflexes
- If the pacifier has not been phased out by this stage, a plan should be developed between parents and/or carers to reduce and cease the pacifier
- "Cold Turkey" options don't have great evidence behind them so a replacement tool is considered best
- If sucking continues there is a chance the child can become reliant on the pacifier for emotional regulation/soothing
- There are also a number of other issues that can present as a result of using the pacifier at this stage and beyond, these include; recurring ear infection, crooked teeth (malocclusion), problems with muscle function and speech plus a less favourable input on facial recognition and mimicry which can impact social engagement
- Slowly introducing chewing toys instead can help over-ride the desire to suck
- Care and a loving approach needs to be taken as much as humanly possible if attempting to transition away from a pacifier at this stage

18+ months

- Pacifiers should be phased out at this age and beyond
- Children and infants using a pacifier beyond 18-24 months amplify the negative side effects and there is a lot of evidence showing extended use creates a number of crooked and incorrect bite patterns
- At this age toddlers have a level of language and comprehension so will understand a gentle approach to transitioning away from pacifier use
- Begin by a long lead in time of consistent verbal preparation, followed by introduction of replacement aids and finally a full transition away from the pacifier. This process may take up to 3-4 months
- Myofunctional Therapy, a series of exercises specifically for the lips face and tongue can be very helpful at this stage and can be simple enough for even very young toddlers to try



Making the Transition

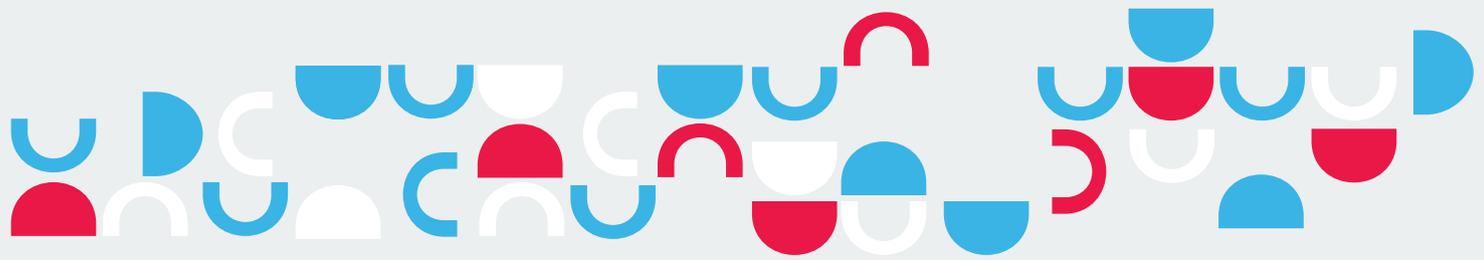
At Munchee we understand the trials and even the guilt or shame felt by parents around pacifier use. We've developed a product specifically for this age group to help small children making the transition from sucking and sucking habits to functional chewing.

The Munchee Bebe is designed for babies from 9 months and is custom designed for this age group. The point of the Bebe is less about "chew time" as the bigger devices are, rather it maximises the development of some of the important nerve pathways that influence development at this age.

We believe this makes the Bebe an ideal addition to the toolbox of pacifier transition as not only does it reduce withdrawal but offers an alternative with very beneficial neurological side-effects.

The Bebe is available through dentists, speech pathologists, manual therapy practitioners and lactation consultants.





References:

1. Adair, S.M., et al., Effects of current and former pacifier use on the dentition of 24- to 59-month-old children. *Pediatr Dent*, 1995. 17(7): p. 437-44.
2. Boccolini, C.S., M.L. Carvalho, and M.I. Oliveira, Factors associated with exclusive breastfeeding in the first six months of life in Brazil: a systematic review. *Rev Saude Publica*, 2015. 49.
3. Bowden, B.D., The effects of digital and dummy sucking on arch widths, overbite, and overjet: a longitudinal study. *Aust Dent J*, 1966. 11(6): p. 396-404.
4. Feldens, C.A., et al., Advising mothers about breastfeeding and weaning reduced pacifier use in the first year of life: a randomized trial. *Community Dent Oral Epidemiol*, 2013. 41(4): p. 317-26.
5. Field, T.M., Neonatal Stress and Coping in Intensive Care. *Infant Mental Health Journal*, 1990. 11(1): p. 57-65.
6. Gale, C.R. and C.N. Martyn, Breastfeeding, dummy use, and adult intelligence. *Lancet*, 1996. 347(9008): p. 1072-5.
7. Gois, E.G., et al., Influence of nonnutritive sucking habits, breathing pattern and adenoid size on the development of malocclusion. *Angle Orthod*, 2008. 78(4): p. 647-54.
8. Humphreys, H.F. and B.C. Leighton, A survey of antero-posterior abnormalities of the jaws in children between the ages of 2 and 5 1/2 years of age. *Br Dent J*, 1950. 88(1): p. 3-15.
9. Jaafar, S.H., et al., Effect of restricted pacifier use in breastfeeding term infants for increasing duration of breastfeeding. *Cochrane Database Syst Rev*, 2016(8): p. CD007202
10. Larsson, E., Dummy- and finger-sucking habits with special attention to their significance for facial growth and occlusion. 7. The effect of earlier dummy- and finger-sucking habit in 16-year-old children compared with children without earlier sucking habit. *Swed Dent J*, 1978. 2(1): p. 23-33.
11. Marter A, Agruss JC. Pacifiers: An update on use and misuse. *Journal for Specialists in Pediatric Nursing*. 2007 Oct;12(4):278-85.
12. Moimaz, S.A., et al., Longitudinal study of habits leading to malocclusion development in childhood. *BMC Oral Health*, 2014. 14: p. 96.
13. Moon, R.Y., et al., Physician recommendations regarding SIDS risk reduction: a national survey of pediatricians and family physicians. *Clin Pediatr (Phila)*, 2007. 46(9): p. 791-800.
14. Nelson, A.M., A comprehensive review of evidence and current recommendations related to pacifier usage. *J Pediatr Nurs*, 2012. 27(6): p. 690-9.
15. Niemela, M., M. Uhari, and M. Mottonen, A pacifier increases the risk of recurrent acute otitis media in children in day care centers. *Pediatrics*, 1995. 96(5 Pt 1): p. 884-8.
16. Nihi, V.S.C., et al., Pacifier-sucking habit duration and frequency on occlusal and myofunctional alterations in preschool children. *Brazilian Oral Research*, 2015. 29(1).
17. Oberman, L.M., P. Winkielman, and V.S. Ramachandran, Face to face: blocking facial mimicry can selectively impair recognition of emotional expressions. *Soc Neurosci*, 2007. 2(3-4): p. 167-78.
18. Ponari, M., et al., Mapping correspondence between facial mimicry and emotion recognition in healthy subjects. *Emotion*, 2012. 12(6): p. 1398-403.
19. Poyak, J., Effects of pacifiers on early oral development. *Int J Orthod Milwaukee*, 2006. 17(4): p. 13-6.
20. Salah, M., et al., Recurrent acute otitis media in infants: analysis of risk factors. *Int J Pediatr Otorhinolaryngol*, 2013. 77(10): p. 1665-9.
21. Scavone-Junior, H.F., R.; Mendes, T.; Ferreira, F., Prevalence of posterior crossbite among pacifier users: a study in then deciduous dentition. *Brazilian Oral Research*, 2007. 21(2): p. 153-158.
22. Sipsma, H.L., K. Kornfeind, and L.R. Kair, Pacifiers and Exclusive Breastfeeding: Does Risk for Postpartum Depression Modify the Association? *J Hum Lact*, 2017. 33(4): p. 692-700.
23. Steir, A.J. and E.B. Lehman, Attachment to transitional objects: role of maternal personality and mother-toddler interaction. *Am J Orthopsychiatry*, 2000. 70(3): p. 340-50.
24. Svedmyr, B., Dummy sucking. A study of its prevalence, duration and malocclusion consequences. *Swed Dent J*, 1979. 3(6): p. 205-10.
25. Warren, J.J., et al., Pacifier use and the occurrence of otitis media in the first year of life. *Pediatr Dent*, 2001. 23(2): p. 103-7.
26. Warren, J.J. and S.E. Bishara, Duration of nutritive and nonnutritive sucking behaviors and their effects on the dental arches in the primary dentition. *Am J Orthod Dentofacial Orthop*, 2002. 121(4): p. 347-56.