

## The Possums Sleep Program: Supporting easy, healthy parent-infant sleep

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### INTRODUCTION

Sleep is challenging for many parents in the early weeks, months, and years of their child's life. But increasing numbers of parents prefer not to use the popularly available sleep training approaches. Breastfeeding women do not wish to disrupt baby-led breastfeeding in the night, but may also experience excessive night waking. The Possums Sleep Program aims to minimise night waking, maximise enjoyment of the baby, and optimise developmental outcomes. It eliminates the causes of excessive night waking, educates parents about cued care and normal night waking, about the healthy function of the two biological sleep regulators, how to decrease excessive night waking, and how to re-set their baby's circadian clock. The program integrates evolutionary science, lactation science, neuroscience, and sleep science with Acceptance and Commitment Therapy, which focuses on values-aligned action, unhooking from difficult thoughts and feelings, present moment living, and expansion of attention.

*Keywords: infant sleep, breastfeeding, parenting, evolutionary science*

### Why is there a need for the Possums Sleep Program?

Over a third of Australian parents report sleep problems at four weeks post-birth, and up to a third will seek help for their baby's sleep from health professionals at some time.<sup>1</sup> Many more search online and in book-stores for information.

The most popular available approaches derive from what is technically known as First Wave Behaviourism (FWB), a school of psychology from the mid-twentieth century which aimed to entrain infant biology and behaviour.<sup>2</sup> Typical FWB strategies are listed in Box 1. However, growing numbers of parents do not wish to apply them.<sup>3,4</sup> FWB approaches disrupt cued care, by teaching parents to delay responses to their baby's communications or cues, or to respond but not in the manner that they believe their baby wants, or to ignore powerful biological

cues such as drowsiness at the end of a breastfeed. Parents are aware of the extensive psychological and neuroscience research demonstrating the importance of cued care for strong and healthy parent-infant attachment and good mental health life-long.<sup>5</sup>

Some feel pressured into applying FWB interventions because of warnings that sleep disruptions in the first months of life may result in developmental problems when their child is older.<sup>6, 7</sup> But this link is an association, not causation, and may even be best explained, paradoxically, by the current widespread application of FWB approaches, which exacerbate parent-infant sleep anxiety, disrupting easy sleep.<sup>3, 4</sup> Significantly, high level evidence shows that FWB approaches don't decrease night waking in the first twelve months of life.<sup>8-11</sup> Links between sleep disturbance and postnatal depression are complex, not causative; breastfed babies may wake more but their mothers report better sleep, and poor sleep efficiency (typically caused by anxiety) appears to be the important factor linking with postnatal depression, rather than number of times the baby wakes at night.

### **What is the content and structure?**

The Possums Sleep Program promotes cued care to support optimal neurodevelopment.<sup>5</sup> It differentiates between normal night waking, which may every two hours in the night, with swift return to sleep for parents and baby, and excessive night waking, which is characterised by regular patterns of hourly or more frequent waking. Unnecessary or excessive night waking may be caused by unidentified and unmanaged breastfeeding problems and poor satiety, particularly in young babies, or by disruption to the infant's circadian clock.<sup>12</sup>

Parents are educated about normal infant night waking and the highly variable nature of infant sleep durations.<sup>13, 14</sup> Because of this extreme variability, the Possums Sleep Program avoids any attempt to estimate how much time a baby might need to sleep. Parents are also educated about the two biological sleep regulators, the sleep-wake homeostat and the circadian clock.<sup>15</sup> Healthy function of the sleep-wake homeostat occurs when the baby's sleep pressure is understood to be the normal stimulus for sleep. Often, particularly if parents have been applying FWB approaches, using quiet dark rooms during the day so that the baby takes 'second sleep cycles', the circadian clock is disrupted, resulting in excessive night waking, which is addressed.

The importance of richly diverse day-time and evening sensory nourishment is emphasised, in contrast to the FWB approach focus on avoiding 'overstimulation'. This is best achieved when the carer leads an active life during the day outside the low sensory interior environment of the home. The concept of 'overstimulation' is not used in the Possums Sleep Program, firstly because it is not an evidence-based concept, and secondly because there is reliable evidence that rich sensory nourishment enhances neurological development.<sup>16, 17</sup>

Most importantly, the Possums Sleep Program integrates strategies from applied functional contextualism, popularly known as Acceptance and Commitment Therapy (ACT). ACT is a modern form of Cognitive Behavioural Therapy, with a rapidly growing evidence base. Values-based parenting improves parental mood, purpose, vitality and enjoyment of life with the baby.<sup>18</sup> The Possums Sleep Program includes a range of ACT strategies for unhooking from

difficult thoughts, making room for difficult feelings, present moment living, and expansion of attention.

### **How is the Possums Sleep Program delivered?**

In 2011, working as a GP, lactation consultant, and researcher, I established the first Possums Clinic in Annerley, Brisbane, Australia. Our small multi-disciplinary team began to deliver an early version of the sleep program, as part of a broader program for unsettled infant behaviour, with excellent clinical results.

In 2013, we founded Possums Education, a charitable organisation, which delivers evidence-based educational material both online and face-to-face to both parents and health professionals for the care of parents and babies.

In 2014, clinical and developmental psychologist and researcher Dr Koa Whittingham and myself developed the Possums Sleep Program. We published a theoretical framing paper, demonstrating the strong and integrative evidence-base upon which the Possums Sleep Program rests.<sup>2</sup>

The Possums Sleep Program comprises one domain of community-based Neuroprotective Developmental Care (or 'the Possums programs'), an innovative, integrated approach to the care of parents and babies across the domains of breastfeeding, cry-fuss problems, sleep, and perinatal mental health.

The Possums Sleep Intervention has now been delivered, and continues to be delivered, in a variety of formats (see Box 2). It is currently delivered clinically at the Possums Education and Research Centre, Greenslopes, Brisbane, face-to-face and in online consultations nationally and internationally. It can also be purchased online as a self-help video at [www.possumsonline.com](http://www.possumsonline.com).

### **Delivery of the program and health professional training**

Neuroprotective Developmental Care (or the Possums programs) are taught to health professionals in Level 1 Certification days, Level 2 Masterclasses, and Level 3 the NDC Accreditation Pathway. To date, about 1000 health professionals, mostly in Australia but also overseas, have either attended or viewed the Certification days online over the past few years. There is a small cohort of early adopter health professionals currently undertaking Accreditation and the Masterclasses, which are both new initiatives, teaching delivery of the Possums Sleep Program in depth, with accompanying templates. GPs, paediatricians, child health nurses, midwives, lactation consultants, mental health experts, and allied health professionals have all participated in the Possums training days, including in the delivery of the Possums Sleep Program.

### **Parent feedback and evaluation**

Clinically, parents typically give very positive feedback about the effects of the Possums Sleep Program on their well-being and sleep. 'It has changed my life', mothers commonly report.

This positive feedback has been confirmed in Professor Helen Ball's preliminary evaluation of 64 participants.<sup>19</sup> Professor Helen Ball and her team at the Durham University Parent-Infant Sleep Laboratory are currently collaborating with Possums Education and adapting the Possums Sleep Program for the UK context, in a program called as 'Sleep, Baby and You'.

Professor Ball has written: *Having researched all the infant sleep interventions in use around the English-speaking world, I felt the approach devised by Pam and Koa was most in tune with the scientific understanding of parent-infant sleep biology and our own anthropological studies of parental needs during early infancy.*

Professor Ball collected the data using a mixed methods approach involving a) an online survey created by the evaluator; b) individual and group discussions held by the evaluator with parents attending the Possums Clinic for infant sleep-related reasons; and c) observations made by the evaluator during group sessions of parents and clinicians during which infant sleep issues were discussed. Mothers averaged 34 years of age, the majority were partnered, well- educated and were breastfeeding their infants.

As one the participants in the evaluation reported:

*It was more than useful, it was life changing. Between the book, the online programs and the skype consult, I experienced such a difference in the enjoyment of my time with my baby and I'm still reaping the benefits. Honestly, it was probably the best thing I've ever done in my life because I felt so lost.*

### **Into the future**

Those of us who have been delivering the Possums Sleep Intervention believe that in time, it will be the dominant approach to parent-infant sleep, because of its focus on healthy, easy sleep and enjoyment of life with the baby.

#### **Box 1**

##### **First Wave Behaviourism**

Teach baby to self-settle

Sleep breeds sleep

Watch for tired signs and put baby down straight away

Put baby to bed for the night at a regular, early hour

Don't let baby develop bad habits such as breastfeeding off to sleep

Don't let baby become overtired or overstimulated

Bad sleep habits will impair baby's development

Delay responses to baby's cues

Feed-play-sleep cycles

**Box 2**

The Possums Sleep Film (purchased online or DVD AUS\$30 [www.possumsonline.com](http://www.possumsonline.com))

The Possums Sleep Workbook (downloadable with purchase of the Possums Sleep Film)

Face-to-face consultations

Online consultations (Skype, Zoom)

Group visits

1. Hiscock H, Cook F, Bayer J, Le HN, Mensah F, Cann W, et al. Preventing early infant sleep and crying problems and postnatal depression: a randomized trial. *Pediatrics*. 2014;133:1-9.
2. Whittingham K, Douglas PS. Optimising parent-infant sleep from birth to 6 months: a new paradigm. *Infant Mental Health Journal*. 2014;35:614-623.
3. Blunden S, Etherton H, Hauck Y. Resistance to Cry Intensive Sleep Intervention in Young Children: Are We Ignoring Children's Cries or Parental Concerns? *Children*. 2016;3(2):8.
4. Loutzenhiser I, Hoffman J, Beatch J. Parental perceptions of the effectiveness of graduated extinction in reducing infant night-wakings. *Journal of Reproductive and Infant Psychology*. 2014;32:282-291.
5. Leclere C, Viaux S, Avril M, Achard C, Chetouani M, Missonnier S, et al. Why synchrony matters during mother-child interactions: a systematic review. *Plos One*. 2014;9(12):e113571.
6. Hiscock H, Fisher J. Sleeping like a baby? Infant sleep: impact on caregivers and current controversies. *Journal of Paediatrics and Child Health*. 2014;51:361-364.
7. Williams KE, Nicholson JM, Walker S, Berthelsen D. Early childhood profiles of sleep problems and self-regulation predict later school adjustment. *British Journal of Educational Psychology*. 2016;86:331-350.
8. Kempler L, Sharpe L, Miller CB, Bartlett DJ. Do psychosocial sleep interventions improve infant sleep or maternal mood in the postnatal period? A systematic review and meta-analysis of randomised controlled trials. *Sleep Medicine Reviews*. 2016;29:15-22.
9. Douglas P, Hill PS. Behavioural sleep interventions in the first six months of life do not improve outcomes for mothers or infants: a systematic review. *J Dev Behav Pediatr*. 2013;34:497-507.
10. Bryanton J, Beck C, Montelpare W. Postnatal parental education for optimizing infant general health and parent-infant relationships. *Cochrane Database Syst Rev*. 2013(11):CD004068. DOI: 004010.001002/14651858.CD14004068.pub14651854.
11. NHMRC report on the evidence: promoting social and emotional development and wellbeing of infants in pregnancy and the first year of life. <http://www.nhmrc.gov.au>: Australian Government, 2017.
12. Douglas PS, Geddes DB. Practice-based interpretation of ultrasound studies leads the way to less pharmaceutical and surgical intervention for breastfeeding babies and more effective clinical support. *Midwifery*. 2018;58:145-155.
13. Galland BC, Sayers RM, Cameron SL, Gray AR, Heath AM, Lawrence JA, et al. Anticipatory guidance to prevent infant sleep problems within a randomised controlled trial: infant, maternal and partner outcomes at 6 months of age. *BMJ Open*. 2017;7(5).

14. Dias CC, Figueriedo B, Rocha M, Field T. Reference values and changes in infant sleep-wake behaviour during the first 12 months of life: a systematic review. *Journal of Sleep Research*. 2018;doi:10.1111/jsr.12654.
15. Jenni OG, Carskadon MA. Sleep behavior and sleep regulation from infancy through adolescence: normative aspects. *Sleep Medicine Clinics*. 2007;2(321-329).
16. Douglas PS, Hill PS. A neurobiological model for cry-fuss problems in the first three to four months of life. *Med Hypotheses*. 2013;81:816-822.
17. Lickliter R. The integrated development of sensory organization. *Clinics in Perinatology*. 2011;38:591-603.
18. Whittingham K, Douglas PS. "Possums": building contextual behavioural science into an innovative evidence-based approach to parenting support in early life. In: Kirkaldy B, editor. *Psychotherapy in parenthood and beyond*. Turin, Italy: Edizioni Minerva Medica; 2016. p. 43-56.
19. Ball H, Douglas PS, Whittingham K, Kulasinghe K, Hill PS. The Possums Infant Sleep Program: parents' perspectives on a novel parent-infant sleep intervention in Australia. *Sleep Health: Journal of the National Sleep Foundation*. 2018.4(6):519-526.