What are best practices in managing infant sleep problems?

KATHLEEN DOUKAS, MSCCH, MD, CCFP

WILLIAM J. WATSON, MD, FCFP

JEAN CLINTON, BMUS, MD, FRCP

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#F442

Faculty/Presenter Disclosure

Faculty:

William Watson MD -no commercial support or conflict of interest. Works as a Family Physician at St. Michael's Hospital, Toronto

Relationships with commercial interests: N/A

Faculty/Presenter Disclosure

Faculty:

Jean M Clinton B.Mus MD FRCP(C) – no commercial support or conflict of interest. Works at McMaster University, Offord Centre for Child Studies. Child Trauma Academy Fellow, Zero to Three Fellow class of 2012-2014

Relationships with commercial interests: N/A

Faculty/Presenter Disclosure

Faculty:

Kathleen Doukas MD – no commercial support or conflict of interest. Works as a Family Physician at St. Michael's Hospital, Toronto

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Mitigating Potential Bias

- N/A

Learning Objectives

Upon completion, participants will be able to:

Describe common causes of sleep problems in infants

Review evidence for new theories and ‘best practice’ treatment approaches

Be aware of how family dynamics, infant temperament and attachment style link to sleep training options

Apply at least one sleep management strategy for immediate use in clinical practice

Impact of infant sleep problems

Family Practice Context

High prevalence (~ 30% of children)

Double the risk of maternal depression symptoms

Common driver of health care for infants and families

Couples stress

Family stress - siblings

Case

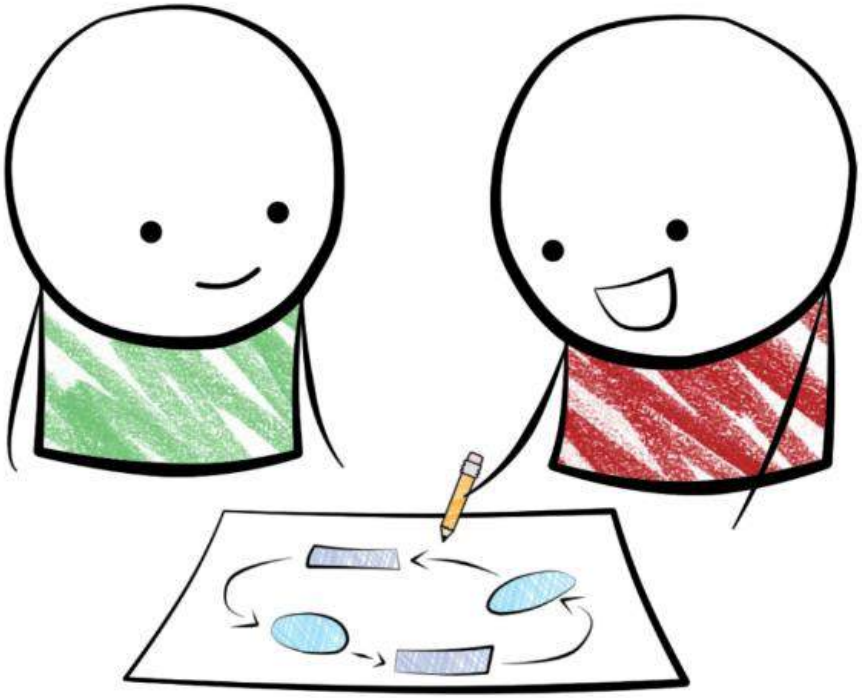
A 32 year old mother of two presents with her 6 month old baby for a well baby exam. Mom notes that the baby will not sleep and cries every hour until she is put on the breast. Physical examination, developmental milestones, and weight gain are normal.

Mom looks very tired and tearful.

She states that the baby will sleep with the father for several house allowing her to sleep, but dad travels monthly for work.

Next steps?

Please pair off with your neighbor to discuss how you would help this family in your practice



Options

- do nothing
  - Discuss night wakings/normalize behaviour; offer support; advise this will pass in time
- extinction (Ferber, Weissbluth)
  - Controlled crying/graduated extinction vs. cry it out (”CIO”)
- fading/fade it out (“FIO”) (West)
- chair method
- pick up/put down method

Origins of sleep problems

Multifactorial!

- Infant's temperament
- Maternal health
- Family supports
- Adverse childhood experiences
- Importance of attachment

A word on temperament…

- baby's/child's behavioural style
  - Determines how they react to situations, express & regulate emotions
- characteristics of temperament (1960s NYC study)
  - "Easy" (40%)
  - "Difficult" (10%)
  - "Slow-to-warm-up" (5-15%)
  - Combination of the above (40%)

- About Kids Health website (Accessed Oct 19, 2018)

Contribution of infants' sleep and crying to marital relationship of first-time parent couples in the 1st year after childbirth

Meijer, Anne Marie,van den Wittenboer, Godfried L. H. Journal of Family Psychology, Vol 21(1), Mar 2007, 49-57

- study investigated the influence of infants' sleep and crying on marital relationship in first-time parent couples (N = 107) during the 1st year after birth

- Questionnaires administered to both parents before birth, at 2 and 7 weeks after birth, and at 1 year after birth

- Results: marital problem-solving ability did not change but marital satisfaction diminished significantly over time
  - Crying was the main child variable that affected marital satisfaction
  - Fathers' self-efficacy contributed positively to marital problem solving and negatively to paternal insomnia
  - **Both maternal and paternal insomnia affected spouses' insomnia. As infant sleep problems may worsen preexisting parental insomnia, it is recommended that first-time parents be informed about treatments of insomnia**

Fatigue, wellbeing and parenting in mothers of infants and toddlers with sleep problems

Gialo R, Rose N & Vittorino R. Journal of Reproductive and Infant Psychology. Vol 29, 2011, Issue 3

- **Results:** Mothers reported moderate levels of fatigue, which was associated with high levels of depression, anxiety and stress

- Fatigue was also significantly associated with low parental self-efficacy, parenting warmth and involvement, and high parenting hostility

- Limited health and self-care behaviours, unrealistic expectations about sleep, and high need for social support were significant predictors of fatigue

Sleep arrangements, parent-infant sleep during the first year, and family functioning

Teti et al, Dev Psychol. 2016 Aug; 52(8): 1169–1181.

-Unique study, filming in bedroom, finds no evidence that sleeping with infants causes problems, but suggests difficulties in a couple's relationship.

-MAJORITY CO-SLEEP BUT SWITCH BABY TO SEPARATE ROOM BY SIX MONTHS

-FAMILY DYSFUNCTION LINK TO CO-SLEEPING SUPPORTED BY PREVIOUS STUDIES

-NO EVIDENCE THAT CO-SLEEPING IS A PROBLEM IN ITSELF

-PRACTICAL IMPLICATIONS

- Practitioners should advise parents contemplating what sleep arrangement(s) to use, particularly long-term co-sleeping arrangements, to keep in the forefront the need to nurture and maintain a healthy balance between their own relationship and their relationship with the infant.

Goals of sleep interventions

Better infant sleep!

Lower maternal depression

Improved child-parent (family) relationships

What's the evidence?

Infant sleep problems are associated with parental depression, psychological distress, and poor general health

Increased infant sleep is associated with easy temperament, adaptability, and low distractibility

Complete extinction (allowing baby to "cry it out") has been demonstrated to be similarly effective, although parents tend to find this method more stressful

Sleep training is simple** and can be introduced at six months. Examples include leaving the room and not returning for 2-5 minutes before responding to crying, then lengthening that interval

** says who??

Korownyk C, Lindblad AJ. Infant sleep Training-rest easy. OCFP-Tools for Practice #196 newsletter_ocfp@cfpc.ca

Evidence (1)

“Controlled crying," is where parents respond to their infant's cry at increasing time intervals to allow independent settling.

Six week Randomized Controlled Trial (RCT) of 235 infants, mean age seven months, with ≥2 awakenings/night on ≥5 nights/week

Sleep training versus safety education. Statistically significant reductions in:

- Parental report severe infant sleep problems: 4% versus 14%, Number Needed to Treat (NNT)=10.
- Number of infants with ≥2 diary-recorded awakenings per night: 31% versus 60%, NNT=4
- Improved parent fatigue, sleep quality, and mood scales.

- Korownyk C, Lindblad AJ. Infant sleep Training-rest easy. OCFP-Tools for Practice #196 newsletter_ocfp@cfpc.ca

Evidence (2)

Cluster RCT, 328 families reporting infant sleep problem, mean infant age seven months. Tailored sleep intervention including sleep training versus usual care.[2] Intervention group:

At 10 months:

- Significant reduction in maternal report of infant sleep problems: 56% versus 68%, NNT=9.
- Non-significant reduction in mothers with depression (Edinburgh Postnatal Depression Scale >9): 28% versus 35%.
  - Those with baseline score >9 had significant numerical improvement in depression scale (subgroup analysis).

At two years:

- Reduced reporting depression symptoms:[3] 15% versus 26%, NNT=9.

At five years:

- No difference in any of 20 outcomes including: child behaviour, relationships, and maternal mental health.

Recent smaller studies[5,6] and systematic reviews[7,8] support sleep training interventions for sleep and improved parent depressive symptoms.[7]

Evidence

Bottom Line: Sleep training improves infant sleep problems, with about 1 in 4 to 1 in 10 benefitting over no sleep training, with no adverse effects reported after *five years*.

Maternal mood scales also significantly improve, with patients having worse baseline depression scores benefitting most.

Possible harms?

Could prevent parents from responding consistently and sensitively to their child

Possible long-term adverse impacts on child-parent bonding, child stress regulation, mental health and emotional development

Blunden et al, 2011

Discussion

- is parent/child outcome after 5 years long enough?

- concerns re: attachment disruption with various types of sleep training in the long term?

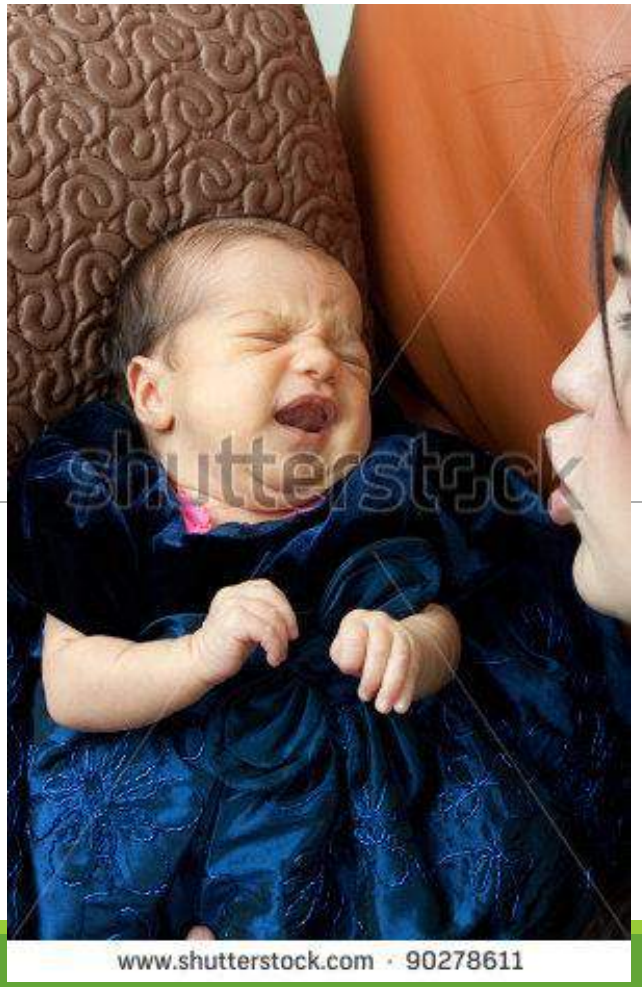
- weighing infant sleep needs with parental mental health

- issues with study methodologies – length of study/long term follow up, methodology, numbers


HOW MUCH SLEEP DO WE REALLY NEED?
12-18 HOURS
NEWBORNS (0-2 mos)
14-15 HOURS
INFANTS (3-11 mos)
12-14 HOURS
TODDLERS (1-3 years)
11-13 HOURS
PRESCHOOLERS (3-5 years)
10-11 HOURS
SCHOOL AGE CHILDREN (5-10 years)
8.5-9.5 HOURS
TEENS (11-17 years)
7-9 HOURS
ADULTS (18+)
SLEEP NEEDS VARY
FOR DIFFERENT AGE GROUPS

What about Attachment?

(In the context of sleep problems)



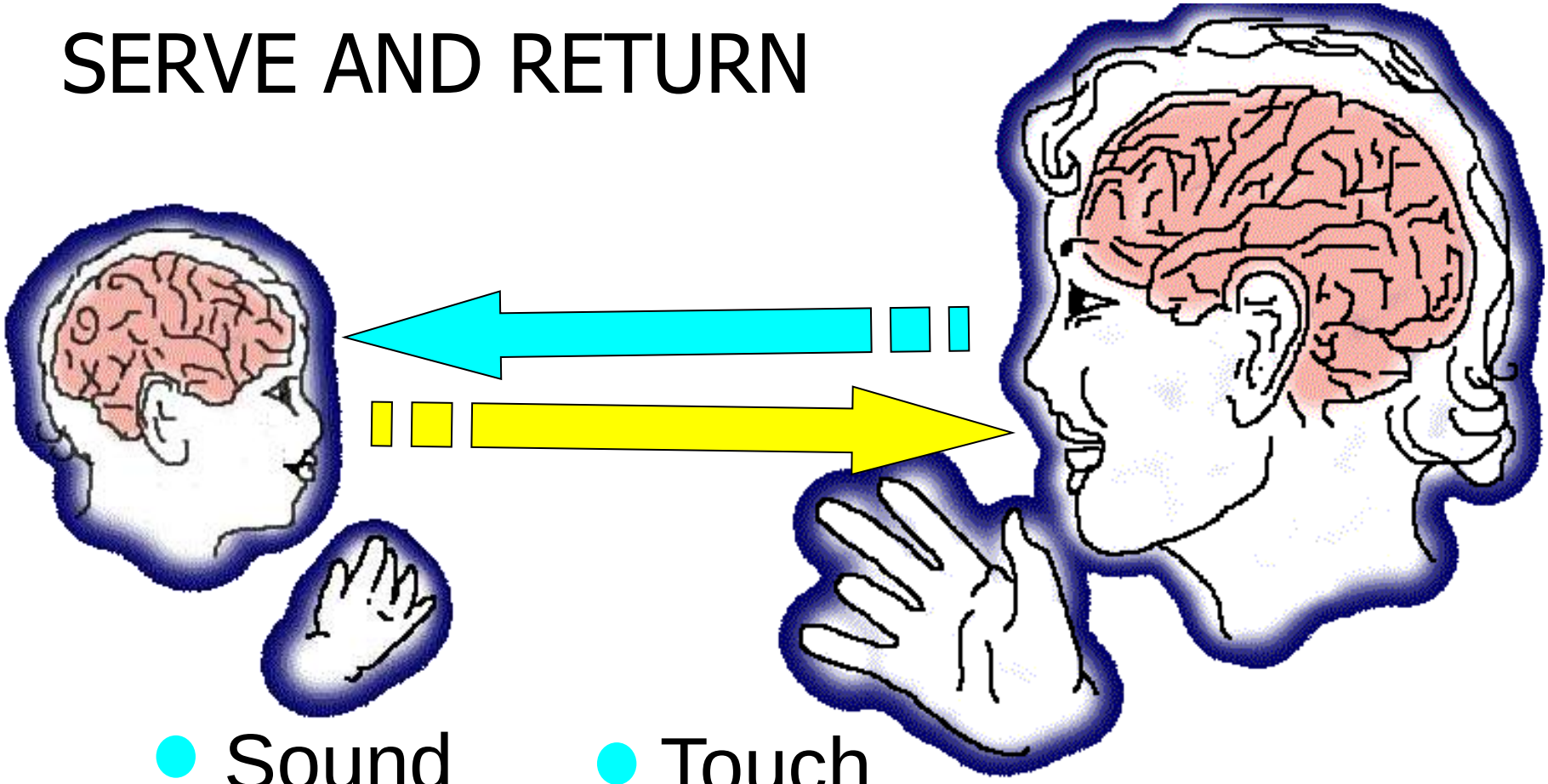
What is Attachment?

An affectional bond or tie between an infant and his/her mother figure.

Secure attachment is an enduring affective bond characterized by a tendency to seek and maintain proximity to a specific person, particularly when under stress.

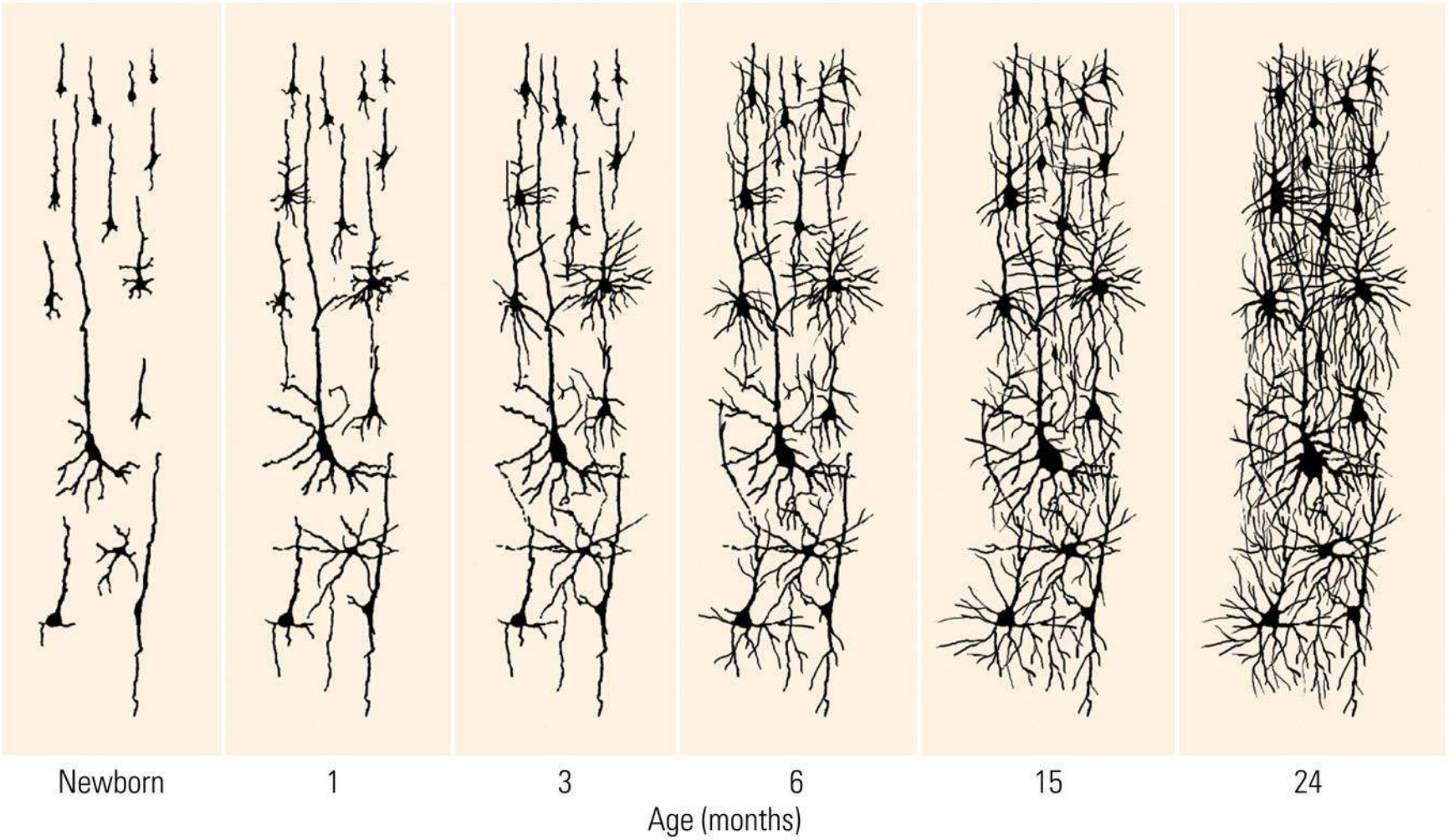
– *Ainsworth and Bowlby*

SERVE AND RETURN



- Sound
- Vision
- Smell
- Touch
- Proprioception
- Taste

Brain cells develop connections over the first 2 years



Then they are actively sculpted for life!

What Influences Attachment?

Mother

- Responsiveness
- Her own childhood experiences
- Personality
- Depression
- Stress – parenting, life events
- Marital satisfaction, social support

Infant

- Unique characteristics
- Reactivity to environment and people
- Special needs (e.g., premature, developmentally delayed)

Signs of Sleep Disorders in Children

Excessive daytime drowsiness

Trouble sleeping-insomnia

Snoring

Night terrors

Nightmares

Sleep walking

Bedwetting

http://www.alaskasleep.com/blog/signs-symptoms-child-has-sleep-disorder

Practical Pearls (from an MD mother of two)

Start good sleep habits EARLY

- Put baby down awake as early as 6-8 wks (anytime after the "fourth trimester")
- Start a bedtime routine as early as possible
- Be aware of sleep associations
  - Nursing/bottle to sleep
  - Pacifier
  - Extended rocking/bouncing

Practical Pearls (from an MD mother of two)

White noise (note 2014 study… max 50 dB, equivalent to light traffic or a refrigerator)

Dark room – beware ambient light!

Cool room

Nursing & night weaning…different for every parent; identify goals and be realistic

Review SIDS risks and sleep safety

A word about Co-sleeping

Not recommended by AAP or CPS

- Newest guidelines suggest room sharing for first 6-12mos; separate sleep surface

Significant cultural differences in co-sleeping/bed-sharing practices and what is “normal”

Harm reduction approach – important to counsel families who choose to co-sleep while making them aware of risks/guidelines

Safe Sleep Recommendations

Supine

Firm sleep surface

Room sharing *without* bed sharing

Avoid soft bedding and overheating

Avoid exposure to smoke/ EtoH/illicit drugs

Breastfeeding

Routine immunization

Use of pacifier

Safe Sleep Recommendations

HOWEVER…many families WILL co-sleep for cultural or personal reasons.

It is our job as Family Physicians to provide our patients with evidence for safe sleeping, but also to talk about harm reduction…


Safe Sleep 7
Smart Steps To Safer Bedsharing
Meet all seven and you can sleep sweet
1 NO SMOKING
In the home
or outside
cough
2 SOBER PARENTS
No Alcohol
No Drowsy Meds
3 NURSING MOTHER
Day & Night
4 HEALTHY BABY
Full Term
5 BABY ON BACK
6 NO SWEAT
No Swaddle
7 SAFE SURFACE
No super-soft mattress, no extra pillows, no toys, no heavy covers
Clear of strings and cords
Pack the cracks: use rolled towels or baby blankets
Cover the baby, not the head
A Rhyme for Sleep Time
Sing to "Row, Row, Row Your Boat"
No smoke sober mom
Baby at your breast.
Healthy baby on his back.
Keep him lightly dressed.
Not too soft a bed.
Watch the cords and gaps.
Keep the covers off his head
For your nights and naps.
Sweet Sleep
store.llli.org
la leche league international

Sleep Management Strategies

Summary

Behavior approaches:

-extinction (Ferber, Weissbluth)

- Controlled crying/graduated extinction vs. cry it out (”CIO”)

- fading/fade it out (“FIO”) (West)

- chair method

- pick up/put down method

Red Flags…

Failure to thrive in baby/child

Postpartum depression in mother

Severe behaviour problems (depression, ADHD)

Key Messages

Family physicians can advise their families to use sleep training for their infants without adverse effects

Sleep training is a simple technique that can be introduced at 6 months (and sleep habits, even earlier)

Sleep training improves maternal mood and depression

References

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Questions?

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Complete a session evaluation one of two ways:

- FMF app
- Fmf.cfpc.ca

Session #: F442

Session Name: What are the best practices for managing infant sleep problems?

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