



Interventions to Promote Sleep: Supporting Families in their Management of Sleep Concerns

The approach to promoting healthy sleep must fit the individual infant and their caregivers. Depending on the specific family context, goals, and concerns, a unique approach is required for each family. Public health nurses are well-positioned to support families in developing strategies to manage sleep concerns. This document outlines a “stepped” or sequenced process for providing support to families regarding infant and family sleep health as well as a number of suggestions for sleep promoting interventions.

Steps to Supporting the Attainment of Healthy Sleep

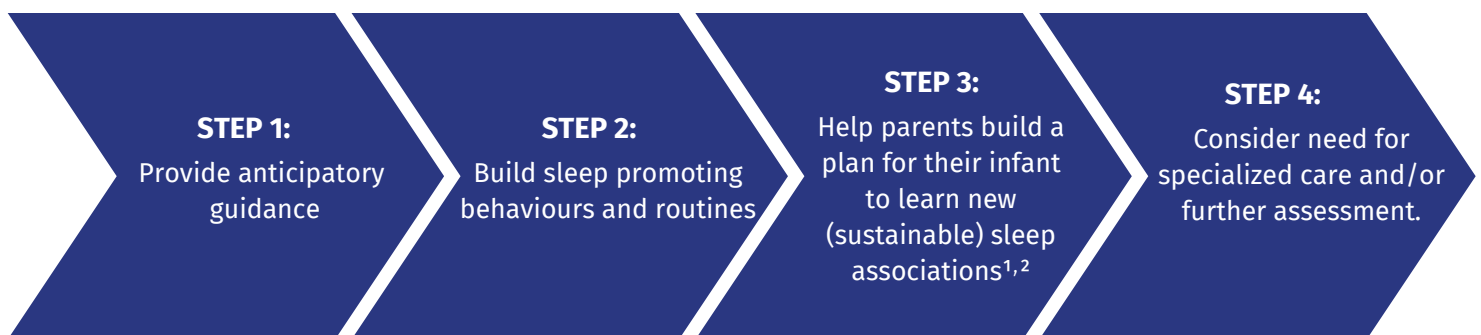
Families participating in Ontario’s home visitation programs who have identified sleep concerns should be encouraged to focus on learning to read and respond to their baby’s cues, as well as establishing a consistent pre-sleep routine as first steps.

Prior to implementing any sleep strategies, the public health nurse should assess and address any issues related to the parent-child relationship and caregivers’ mental health.

Recommended assessments include:

- NCAST Parent-Child Interaction Feeding and/or Teaching Scale(s)
- Edinburgh Postnatal Depression Scale (EPDS) or Patient Health Questionnaire (PHQ-9) or alternative, as per agency protocols

Following thorough assessment, public health nurses can use the following steps to plan and prioritize sleep interventions (see [Assessing Sleep Health in Infants](#)). These steps should be completed in sequence, based on the needs or interests of the family, noting that not every step will apply to every family.



Step 1: Provide anticipatory guidance

- ✓ Discuss cue-based care and offer support in recognizing infant sleep cues.
- ✓ Share what caregivers can expect regarding age-appropriate sleep behaviours, factors that may influence sleep, the development of sleep habits, and the importance of social supports.
- ✓ Review an age-appropriate sleep resource, if applicable (See [Baby's Sleep Guide: Birth to Six Months](#), or [Baby's Sleep Guide: Six to Twelve Months](#)).
- ✓ Reference [Understanding Sleep Health in Families of Infants](#) for additional clinical guidance

Step 2: Build sleep promoting behaviours and routines

- ✓ Work with caregivers to plan pre-sleep routines that are enjoyable and can be consistently implemented
- ✓ Explore opportunities to build daily routines, including consistent wake times and sleep opportunities
- ✓ Discuss other sleep-promoting behaviours, including building warm and responsive parent-child relationships, opportunities for physical activity (e.g., tummy time), limiting sedentary activity and exposure to screens, and building comfortable and safe sleeping environments

Step 3: Help caregivers build a plan for their infant to learn new (sustainable) sleep associations

- ✓ Use therapeutic communication to help families prioritize goals and develop a plan for teaching their infant new sleep associations.
- ✓ The “right” plan is a plan that the caregiver(s) feel good about using consistently. It can also be helpful to guide caregivers in thinking about what they may do if things do not go as planned.
 - The [OARS model \(PHN-PREP\)](#) may be helpful in initiating a conversation that focuses on helping caregiver(s) develop a plan that fits for them
- ✓ Behavioural-based strategies such as Camping Out or Controlled Comforting can be effective in creating new sleep associations that reduce parent-reported wakings with no evidence of long-term negative effects with infants six months of age and older.

Step 4: Consider need for specialized care and/or further assessment


- ✓ Some sleep problems may result from biological and/or physiological causes such as reflux, eczema, ear or urinary tract infections, or anemia, and may require specialized assessments and/or supports from other healthcare providers.



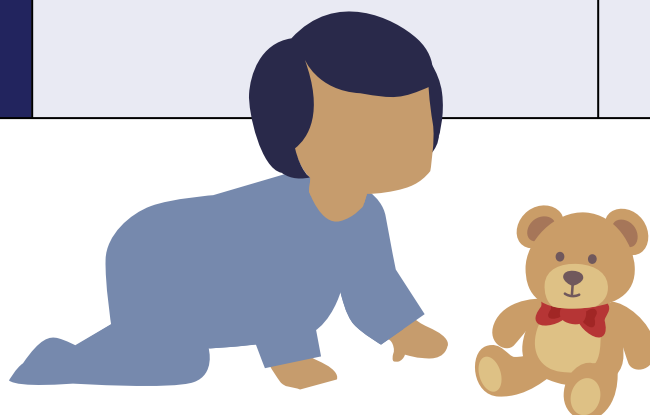
NOTE: Snoring or breathing difficulties during sleep, feeding or weight gain concerns, and/or multiple regulatory concerns (feeding, sleeping and/or crying) are strong indicators of further assessment being required by a health care provider.

Foundational Sleep Health Tips and Interventions

Rooted in the domains of pediatric sleep health (see [Understanding Sleep Health in Infants](#)), the following table provides a comprehensive collection of tips, considerations and interventions that may be discussed with families who identify concern within a particular domain(s).

Sleep Health Domains	Tips & Considerations	Interventions
<p>Duration</p>	<ul style="list-style-type: none"> A balance of physical activity, high quality sedentary behaviours such as reading, storytelling and singing, and sufficient sleep over a 24-hour period is required for healthy growth and development 	<ul style="list-style-type: none"> ✓ Review infant early or subtle sleep cues, as well as later or overtired sleep cues with all caregivers ✓ See ‘Cue-Based Care’ below ✓ Provide guidance on age-appropriate amounts of physical activity such as tummy time spread throughout the day for those not yet walking
<p>Timing</p>	<ul style="list-style-type: none"> You cannot force an infant to sleep, but they can be “set up” for sleep by providing regular routines and external cues that promote sleep Sometimes establishing a consistent pre-sleep routine is enough to improve infant sleep³ The more consistently a pre-sleep routine is used; the more sleep tends to improve! 	<ul style="list-style-type: none"> ✓ Support the family in creating and implementing a consistent pre-sleep routine (typically no longer than 30 minutes; shorter for naps) ✓ See ‘Pre-Sleep Routines’ below
<p>Efficiency</p>	<ul style="list-style-type: none"> Research has shown that a pattern of three or more wakings per night may be considered a problem by caregivers Some infants as young as 5 weeks can resettlement themselves back to sleep⁴ (once feedings are well established) 	<ul style="list-style-type: none"> ✓ If sleep latency is too long, have caregivers reflect on current timing and length of pre-sleep and pre-nap routines ✓ Coaching caregivers on reading their infant’s subtle and potent disengagement cues may help with establishing timing that reduces sleep latency ✓ Support families in learning to differentiate their infant’s cues during wakings (hunger cues vs sounds of active sleep state)

Sleep Health Domains	Tips & Considerations	Interventions
Alertness During Waking Hours	<ul style="list-style-type: none"> Alertness impacts emotional regulation and behaviors such as irritability and hyperactivity 	<ul style="list-style-type: none"> ✓ Coach caregivers to watch their infant for subtle and potent disengagement cues that indicate the need for sleep ✓ Different babies have different “windows” or “gates” for moving through states
Satisfaction & Quality	<ul style="list-style-type: none"> Persistent and severe sleep problems are a risk factor for subsequent behavioral difficulties¹ Unresolved behavioural sleep problems have been found to be a risk factor for parental hostility in general and about sleep, self-efficacy, and perceptions of their low parenting impact Positive social supports and parenting partner involvement in nighttime caregiving can improve perceptions of sleep 	<ul style="list-style-type: none"> ✓ Explore caregivers’ reasons for being dissatisfied with their infant’s sleep ✓ Helping caregivers understand what is developmentally appropriate and/or typical may be helpful in normalizing infant sleep patterns ✓ Share age-related typical expectations related to sleep
Sleep Promoting Behaviours & Environments	<ul style="list-style-type: none"> It is important to explore with families what <i>sleep associations</i> they would like their infant to learn and what sleep associations may be unsustainable Be aware that there may be discrepancy between caregivers regarding beliefs about responding to infant night waking 	<ul style="list-style-type: none"> ✓ Work with the family to develop a plan for teaching their infant sleep associations that they prefer ✓ New (sustainable) sleep associations can be introduced before removing existing sleep associations. ✓ Learning new sleep associations takes repetition. If there are multiple caregivers, it is helpful to use similar routines and build a plan that all caregivers can follow



Evidence-based Sleep Interventions

1) Cue-based Care

As per [Step 1: Provide anticipatory guidance](#), home visiting staff should ensure caregivers understand both early and late sleep cues and can identify and respond appropriately to these signals.

Early or Subtle Sleep Cues	Late Sleep or Overtired Cues
<ul style="list-style-type: none"> • Rubbing eyes • Hands to face/head • Yawning • Glazed look in eyes • Fussing or grunting • Rapid blinking • Red eyes 	<ul style="list-style-type: none"> • Irritable, easily frustrated • Crying • Return of wide-awake state (“second wind”) • Hard to settle / trouble sleeping • Back arching

Suggested resources and interventions:

- PHN-PREP: *Baby's Sleep Guide - Birth to Six Months* handout
- PHN-PREP: *Baby's Sleep Guide - Six to Twelve Months* handout
- PCRP: *Keys to Infant Caregiving* booklets
 - Booklet 1: Infant States
 - Booklet 2: Infant Behaviour
 - Booklet 3: Infant Cues
- PCRP: *Baby Cues* video and/or cue cards
- PCRP: *Look What I'm Saying* handout
- PCRP: *How to Promote Good Sleep Habits: Birth – 3 months* handout
- PCRP: *How to Promote Good Sleep Habits: 4 – 12 months* handout
- PIPE: *Listen Unit, Topic 1: Cribside Communication*
- PIPE: *Listen Unit, Topic 3: Baby Cues*
- PIPE: *Listen Unit, Topic 4: Tune In / Tune Out*



Following intervention, evaluate the caregiver’s ability to read and respond to their infant’s cues through use of the NCAST Parent-Child Interaction Feeding and/or Teaching Scales.

2) Pre-sleep routines

In [Step 2: Build sleep promoting behaviours and routines](#), home visiting staff can support caregivers in developing pre-sleep routines as early as 3 months of age. Research indicates that these should include:

<ul style="list-style-type: none"> • 15-20 minutes of planned activities (it is difficult for a young baby to connect activities to sleep if the activities began more than 30 minutes prior) 	<ul style="list-style-type: none"> • Condensed version to be used in the daytime prior to naps
<ul style="list-style-type: none"> • Short activities that both the caregiver and baby enjoy such as reading or singing 	<ul style="list-style-type: none"> • Warm responsive caregiving activities such as cuddling or massage

It may be helpful to recommend to families that if feeding is part of the pre-sleep routine it happens early in the routine rather than the end. To adjust an existing sleep association, such as feeding to sleep, caregivers can stop the feeding prior to the baby falling asleep and introduce a new desired sleep association between feeding and going to sleep, such that feeding is no longer the end of the routine.

Suggested resources and interventions:

- PHN-PREP: *Baby's Sleep Guide - Birth to Six Months* handout
- PHN-PREP: *Baby's Sleep Guide - Six to Twelve Months* handout
- Best Start: [Sleep Well, Sleep Safe](#)
- Best Start: [Healthy and Safe Sleep Tips for Infants 0-12 months #3: Establishing routines](#)
- PCRP: *Keys to Infant Caregiving* booklets
 - Booklet 4: State Modulation
- PCRP: *How to Promote Good Sleep Habits: Birth – 3 months* handout
- PCRP: *How to Promote Good Sleep Habits: 4 – 12 months* handout
- PIPE: *Listen Unit, Topic 2: Patterns and Expectations*
- PIPE: *Listen Unit, Topic 8: Reading to Baby*

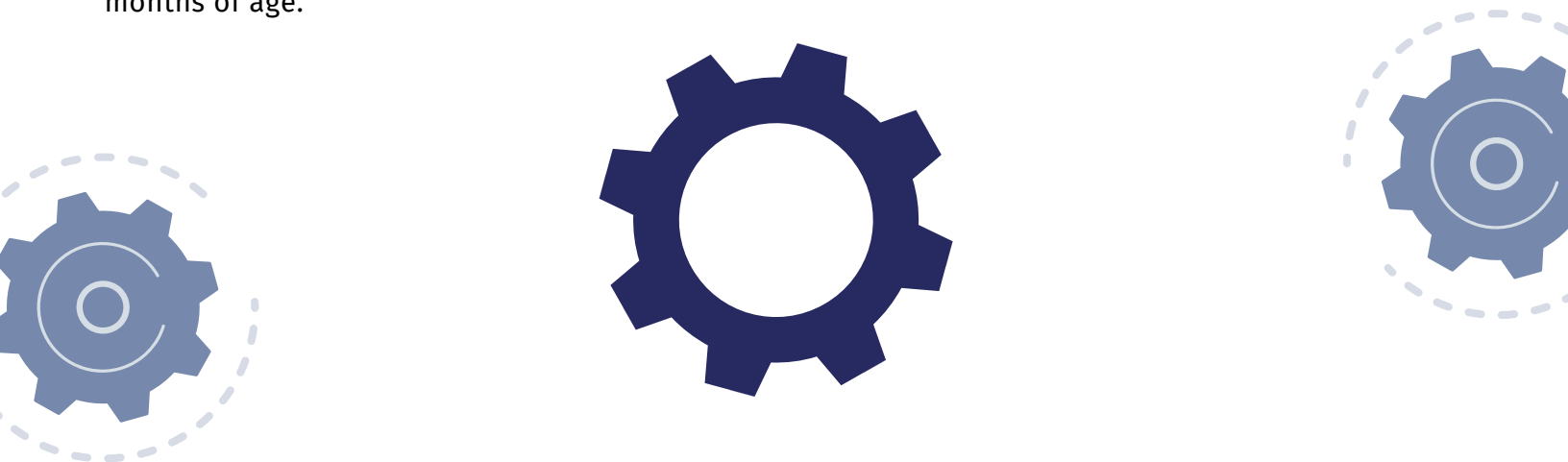


3) Behavioural-based Sleep Strategies

Behavioural-based sleep strategies can help caregivers change their baby's current sleep associations. For example, caregivers can introduce new desired sleep associations before removing associations that are no longer wanted. Learning new habits requires repetition, so work with the family to select a strategy they are comfortable with, can implement, and are committed to using consistently for at least two weeks.

It is important to note that sleep associations that worked well for the first few months of life can stop working as babies develop more awareness of their environments and develop object permanence.

Specific sleep strategies can be implemented within [Step 3: Help caregivers build a plan for their infant to learn new \(sustainable\) sleep associations](#) when a family has expressed the need for support in managing their infant's sleep habits or has requested information about a particular sleep strategy. While there is evidence of long-term negative effects for infants who have persisting night-waking and short sleep duration, behaviour-based sleep strategies have been used for over 30 years with no evidence of negative effects when used correctly for infants over six months of age.



Four behaviour based sleep strategies include:

Bedtime fading:

Bedtime is gradually adjusted (5 to 15 minutes every 3-5 days) to coincide closer to the actual time of falling asleep.

Camping Out:

Also known in the literature as ‘gradual extinction’ or ‘fading of parental involvement’. This strategy is suitable for infants over six months of age and involves a slow and gradual reduction of caregiver interventions at bedtime. The baby is placed in their sleep space drowsy and the caregiver stays in the sleep space until the child settles. Over time the caregiver moves further from the baby until the caregiver has moved outside of the baby’s sleep space.

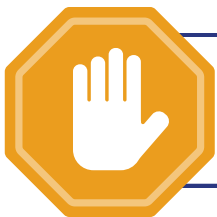
Controlled Comforting:

Also known in the literature as ‘graduated extinction’ or ‘graded extinction’ and is only suitable for infants over six months of age. For this strategy, a baby over six months of age is placed in their sleep space drowsy, if protest or crying occurs the caregiver goes to the baby for a brief period at set intervals. The length of these intervals is increased each night. For example, the first night the caregiver responds to a six- to eight-month-old baby’s calls (crying or protests) every two minutes, the second night every four minutes, the third night every six minutes, and so on. An older baby, nine-months of age and older, may prefer a longer check-in time interval, as long as it is not longer than 15 minutes. As the baby learns to self-regulate, the same checking-in strategy is used to respond to any night wakings.

Crying it Out:

Also referred to as ‘extinction’, this approach involves putting the child to sleep in a separate room to sleep and not responding to them until a set time in the morning. **This strategy is not recommended at any age.**

Families can use the ‘Controlled Comforting’ and ‘Camping Out’ strategies for babies who are at least six months old. Since object permanence usually develops around nine months, it may be beneficial to wait until this milestone is reached before starting these sleep strategies.



Behavioural-based strategies of Camping Out and Controlled Comforting are NOT recommended prior to six months of age. Crying it Out is not a recommended strategy at any age.

Prior to discussing ‘Camping Out’ and ‘Controlled Comforting’ home visiting staff should first:

- ✓ Work with the family to develop age-appropriate daytime and pre-sleep routines
- ✓ Support the family’s ability to identify and respond to their infant’s cues
- ✓ Discuss other sleep-promoting behaviours, such as:
 - Fostering warm and responsive parent-child relationships
 - Creating opportunities for physical activity and outdoor time
 - Limiting sedentary activity and exposure to screens
 - Building comfortable and safe sleeping environments
 - Promoting desired sleep associations
- ✓ Complete NCAST PCI Feeding or Teaching Scales to assess the parent-child relationship
- ✓ Offer mental health screening of the caregivers

Suggested resources and interventions:

- PHN-PREP: *Sleep Strategies for babies over six months: Camping Out* handout
- PHN-PREP: *Sleep Strategies for babies over six months: Controlled Comforting* handout

Additional Resources for Staff

- [Canadian Sleep Research Consortium](#)
- [Canadian Sleep Society](#)
- “Promoting and Supporting Sleep Health in Families of Infants” webinar by Dr. Elizabeth Keys via PHN-PREP, originally aired February 14, 2024. Recording available: <https://www.youtube.com/watch?v=2yOMIGOyqD8>
- “Indigenous Sleep Knowledge” webinar by Dr. Amy Shawanda via CSRC, originally aired November 11, 2023. Recording available: https://www.youtube.com/watch?v=842e5n_wF4Y
- “Safe Sleep for Your Baby” resource by the Public Health Agency of Canada, June 2021, available [here](#).
- “Understanding Infant Sleep in the First Year: A Guide to Inform Conversations with Expectant and New Parents” resource by Infant and Early Mental Health Promotion, published in the spring of 2020 and available [here](#).

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