



BETTER SLEEP FOR BETTER MOOD

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*People who say
they sleep like
a baby usually
don't have one.*



OBJECTIVES:

- Support parent mental health to maximize infant and toddler sleep.
- Master diagnosis of Behavioral Insomnia and provide office based intervention for parents.
- Maximize adolescent sleep despite COVID 19 shutdowns.

18 month Well Child Check

- *Growth:* Normal
- *Development:* Normal
- *Nutrition:* Breast feeding at night
- *Exam:* Caries on Teeth
- *Parent Concerns:* NOT SLEEPING THROUGH THE NIGHT...

Sleep hygiene for children and adolescents

Sleep hygiene refers to the daily habits and routines that affect nighttime sleep quality and daytime alertness.

Poor sleep hygiene



Good sleep hygiene



Additional sleep hygiene tips

Try to follow a regular schedule for daily activities and events

- wake-up time
- outdoor exercise
- meals
- schoolwork
- presleep relaxation
- bedtime

Allow children to get enough sleep for their age

Age	3-5 y	6-12 y	13-18 y
Sleep time	10-13 h	9-12 h	8-10 h

- <https://jamanetwork.com/journals/jamapediatrics/fullarticle/2770795>
- Stern M, Wagner MH, Thompson LA. Current and COVID-19 Challenges With Childhood and Adolescent Sleep. *JAMA Pediatr.* 2020;174(11):1124. doi:10.1001/jamapediatrics.2020.2784

What are the predictors of increased night time sleep?

- Global Study of 29,287 infants/toddlers (48% boys)

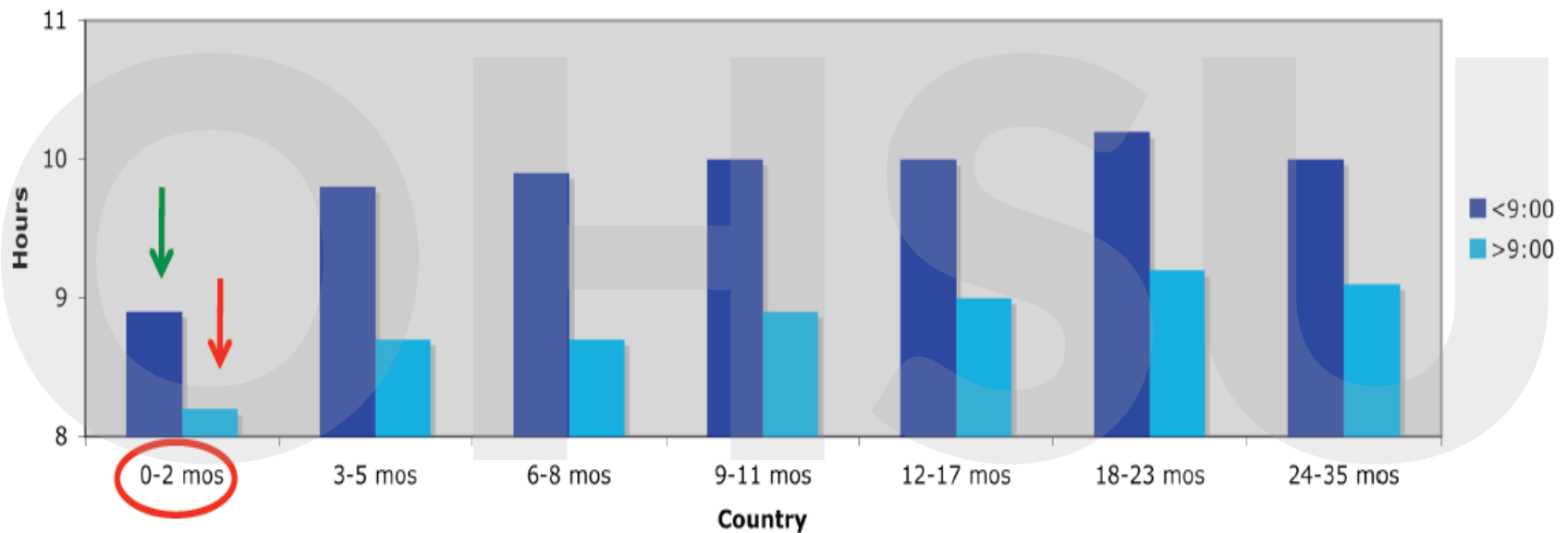
Australia, Canada, China, Hong Kong, India, Indonesia, Korea, Japan, Malaysia, New Zealand, Philippines, Singapore, Taiwan, Thailand, United Kingdom, United States, and Vietnam

- Internet Based expanded version of Brief Infant Sleep Questionnaire

Mindell, JA, Sadeh A, et al. *Sleep ecology and predictors of sleep outcomes in infants and toddlers: A cross cultural comparison*, Sleep Medicine, 2010. (11) 4; 393-399.

BEDTIME EARLIER THAN 21:00

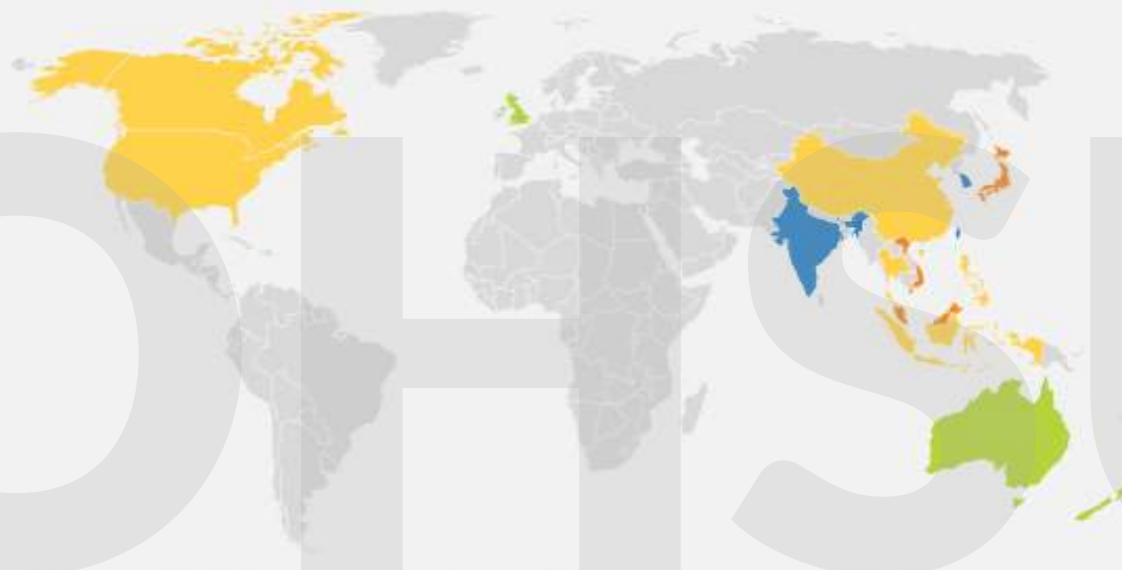
Entire sample



Children's bedtimes across countries

Bedtimes range dramatically among children ages zero to 3 in predominantly Asian and predominantly Caucasian countries.

■ After 7 p.m. ■ After 8 p.m. ■ After 9 p.m. ■ After 10 p.m.



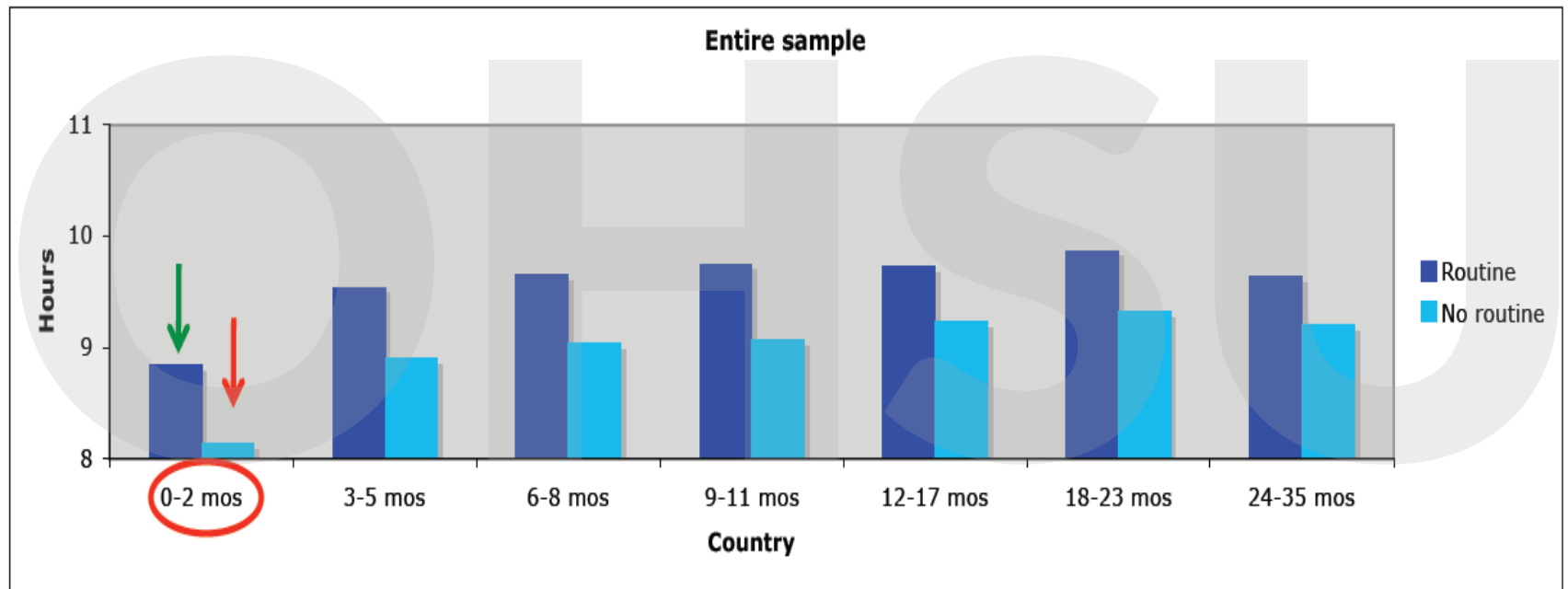
New Zealand	7:28 p.m.
Australia	7:43 p.m.
United Kingdom	7:55 p.m.

Indonesia	8:27 p.m.
Canada	8:44 p.m.
Philippines	8:51 p.m.
United States	8:52 p.m.
Thailand	8:53 p.m.
China	8:57 p.m.

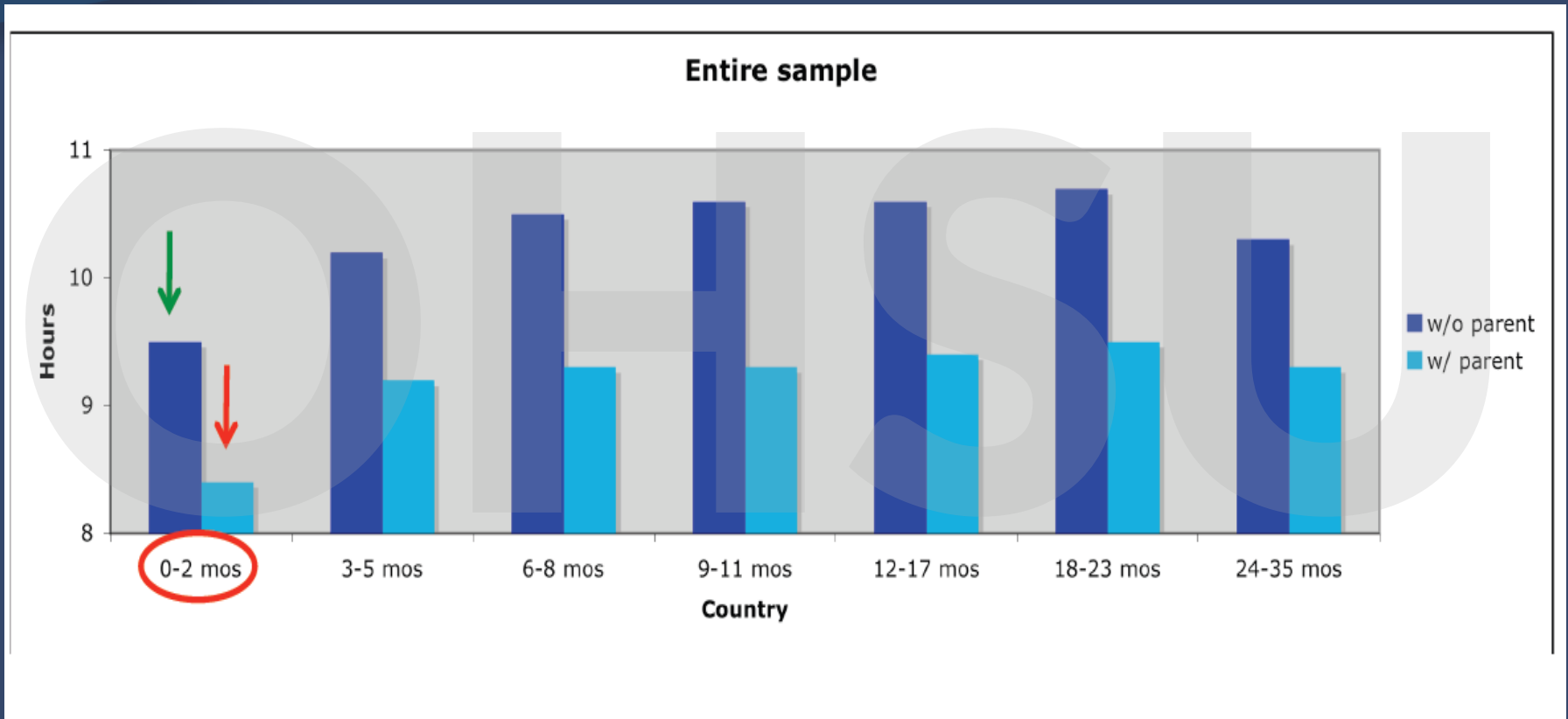
Japan	9:17 p.m.
Vietnam	9:22 p.m.
Singapore	9:38 p.m.
Malaysia	9:47 p.m.

South Korea	10:06 p.m.
Taiwan	10:09 p.m.
India	10:11 p.m.
Hong Kong	10:17 p.m.

BEDTIME ROUTINE



PARENTAL PRESENCE UPON FALLING ASLEEP



More Sleep History..,

Bedtime 10 pm

Plays until she is 'tired'

Falls asleep nursing

When she wakes at 11 pm, nurses

When she wakes at 1 am, nurses

When she wakes at 4 am, nurses and is put
in parent's bed



Behavioral Insomnia of Childhood

- Sleep onset association type
- Limit setting type
- Combined type

Behavioral Insomnia of Childhood:

Sleep onset association Type

- Night-wakings
- 6 months to 3 years
- Involves negative/maladaptive sleep associations
- Inability to self-soothe
- Requires parental intervention to sleep

Behavioral Insomnia of Childhood, **Sleep Onset Association Type**

- Excessive crying at bedtime or upon awakening if parents do not respond in the usual manner
- Quick sleep onset after the usual conditions are established



Reframing the Issues for Parents

- Associations with falling asleep are learned
- A problem may exist if the associations involve the parent
- Awakenings during the night are normal

Signalers vs. Self Soothers

- New sleep-onset associations **can** be taught
- Education regarding importance of adequate sleep

Clinical Management:

1. Sleep schedule:

Appropriate baby bedtime between 7:30-8:30

Tipping point is 9:00 (Mindell et al., 2009)

Daytime schedule

Wake time

Naps

Clinical Management:

2. Bedtime routine

- Same every night (Mindell et al., 2009)
- Positive
- Short and sweet
- Heading in one direction
- Last portion in sleeping environment
- Consistent bedroom environment

Example Bedtime Routine for Toddlers

6:30 start time; 7:15 bedtime

- Dim lights in house, put on soothing music
- Take a bath
- Put on pajamas
- Brush teeth
- Read stories in bed
- Say goodnight to objects in room
- Lights out, sing a song, kiss goodnight
- BEDTIME!!!

Clinical Management

3. Checking Method:

- Goal is for child to fall asleep independently (self-soothe)
- Bedtime only
- Generalization to night wakings
- Frequent or infrequent checking by parent

Clinical Management

- Checking frequency
 - Parent tolerance
 - Child temperament
- Brief and boring
- Take small steps
- Get rid of bottle and just rock to sleep
- Put in crib but sit next to crib
- Sit farther and farther away from crib
- Consistency, consistency, consistency!

Practice Parameters for Behavioral Treatment of Bedtime Problems and Night Wakings in Infants and Young Children

An American Academy of Sleep Medicine Report

Timothy I. Morgenthaler, MD¹; Judith Owens, MD²; Cathy Alessi, MD³; Brian Boehlecke, MD, MSPH⁴; Terry M. Brown, DO⁵; Jack Coleman, Jr., MD⁶; Leah Friedman, MA, PhD⁷; Vishesh K. Kapur, MD, MPH⁸; Teofilo Lee-Chiong, MD⁹; Jeffrey Pancer, DDS¹⁰; Todd J. Swick, MD¹¹

Behavioral interventions are effective, producing reliable and significant improvement in sleep parameters

Unmodified extinction (standard)

Extinction with parental presence (standard)

Preventive parent education (standard)

Graduated extinction (Guidelines)

Bedtime fading (Guidelines)

Positive routines (Guidelines)

Scheduled awakenings (Guidelines)

Standards of Practice Evidence

- 52 studies reviewed

Reliable and durable changes (80% improve)

94% of studies report intervention was efficacious

Mindell et al. Review paper for AASM: Behavioral treatment of bedtime problems and night wakings in young children. Sleep 2006;29: 1263-1276.

Five-Year Follow-up of Harms and Benefits of Behavioral Infant Sleep Intervention: Randomized Trial

Price, et al; PEDIATRICS Volume 130, Number 4, October 2012

- 326 children (173 intervention) with parent-reported sleep problems at age **7 months**
- Behavioral techniques were delivered over 1-3 individual nurse consultations at infant age 8-10 months, versus usual care.
- Measured:
 - (1) child mental health, sleep, psychosocial functioning, stress regulation
 - (2) child-parent relationship
 - (3) maternal mental health and parenting styles.

Five-Year Follow-up of Harms and Benefits of Behavioral Infant Sleep Intervention: Randomized Trial

Price, et al; PEDIATRICS Volume 130, Number 4, October 2012

- Behavioral techniques effectively reduced infant sleep problems and ***associated maternal depression in the short- to medium-term*** (4–16 months' post-intervention).
- Behavioral sleep techniques **did not** cause long-lasting ***harms or benefits*** to child, child-parent, or maternal outcomes.

18 month old; Follow up for behavioral insomnia

- Parents have moved bedtime to 8 pm
- Falling asleep while drowsy but awake, but continued night awakenings
- Parents ready to work on middle of the night behavior
- Mom is pregnant....

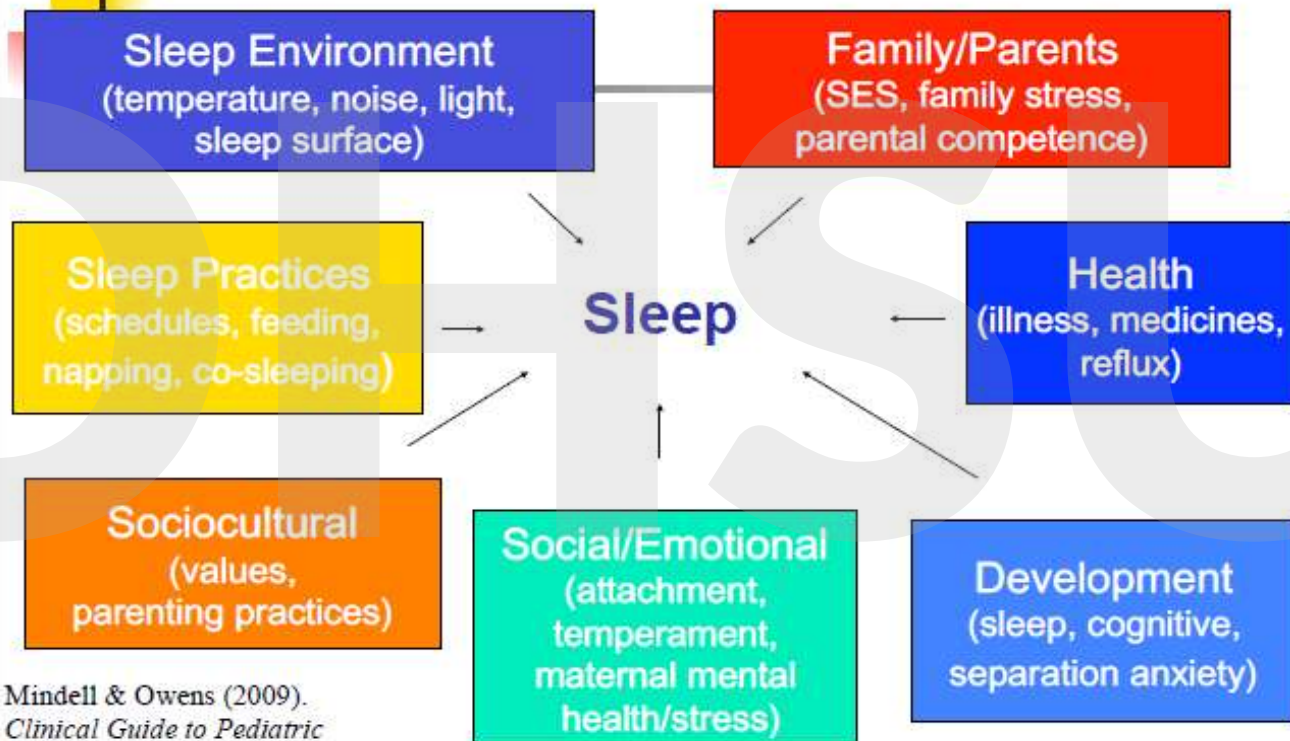
Prevention:

1. Have a **bedtime routine** from day one of life!
2. Establish an appropriate bedtime (prior to 21:00)
3. Make middle of the night feedings boring and keep the lights dark.
4. Incorporate an attachment object in your bedtime routine.
5. At 6-12 weeks put your baby down **drowsy but *awake***.

Behavioral Insomnia of Childhood

- Sleep onset association type
- Limit setting type
- Combined type

Factors affecting sleep in children



Mindell & Owens (2009).
Clinical Guide to Pediatric Sleep.

Behavioral Insomnia of Childhood: **Limit Setting Type**

- Bedtime struggles/bedtime refusal
- Prolonged sleep onset latency
- 2-6 year olds



Behavioral Insomnia of Childhood, **Limit Setting Type: Treatment**



- Firm limits with consistency
- Bedtime chart for both parents and children
- Use of Bedtime PASS
- Positive reinforcement for child
- Sleep logs for progress
- Follow up with realistic expectations

*TREATING BEDTIME RESISTANCE WITH THE BEDTIME PASS:
A SYSTEMATIC REPLICATION AND COMPONENT
ANALYSIS WITH 3-YEAR-OLDS*

KURT A. FREEMAN

CHILD DEVELOPMENT AND REHABILITATION CENTER
OREGON HEALTH & SCIENCE UNIVERSITY

Bedtime Pass

– Children ages 3-10 years old

2 components:

- Card exchangeable for 1 trip out of room
- Extinction if child comes out of room after using pass



Kara's Bedtime Routine

- Bath
- Teeth
- Nightgown
- Choose Clothes
- Story
- Kiss
- Sleep



Sleep Diary

Name:	DOB: / /	Health professional:	Unit #:
Date started: / /	Comments:		
List medications:			

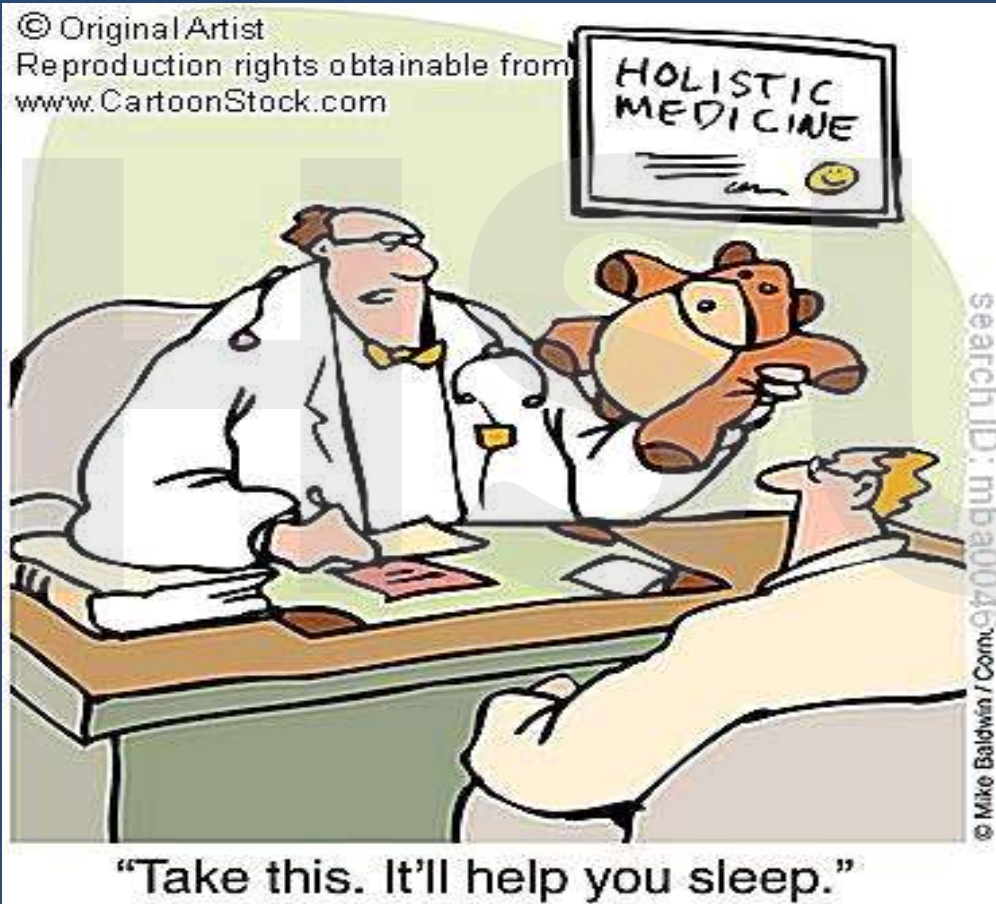
[illegible][illegible]

Key: ↑=out of bed ↓=in bed Filled in=asleep

Source: Shapiro, HL. 1998. Sleep log. Available on the Pediatric Development and Behavior Web site at www.dbpeds.org/handouts.

BRIGHT FUTURES ✱ TOOL FOR FAMILIES

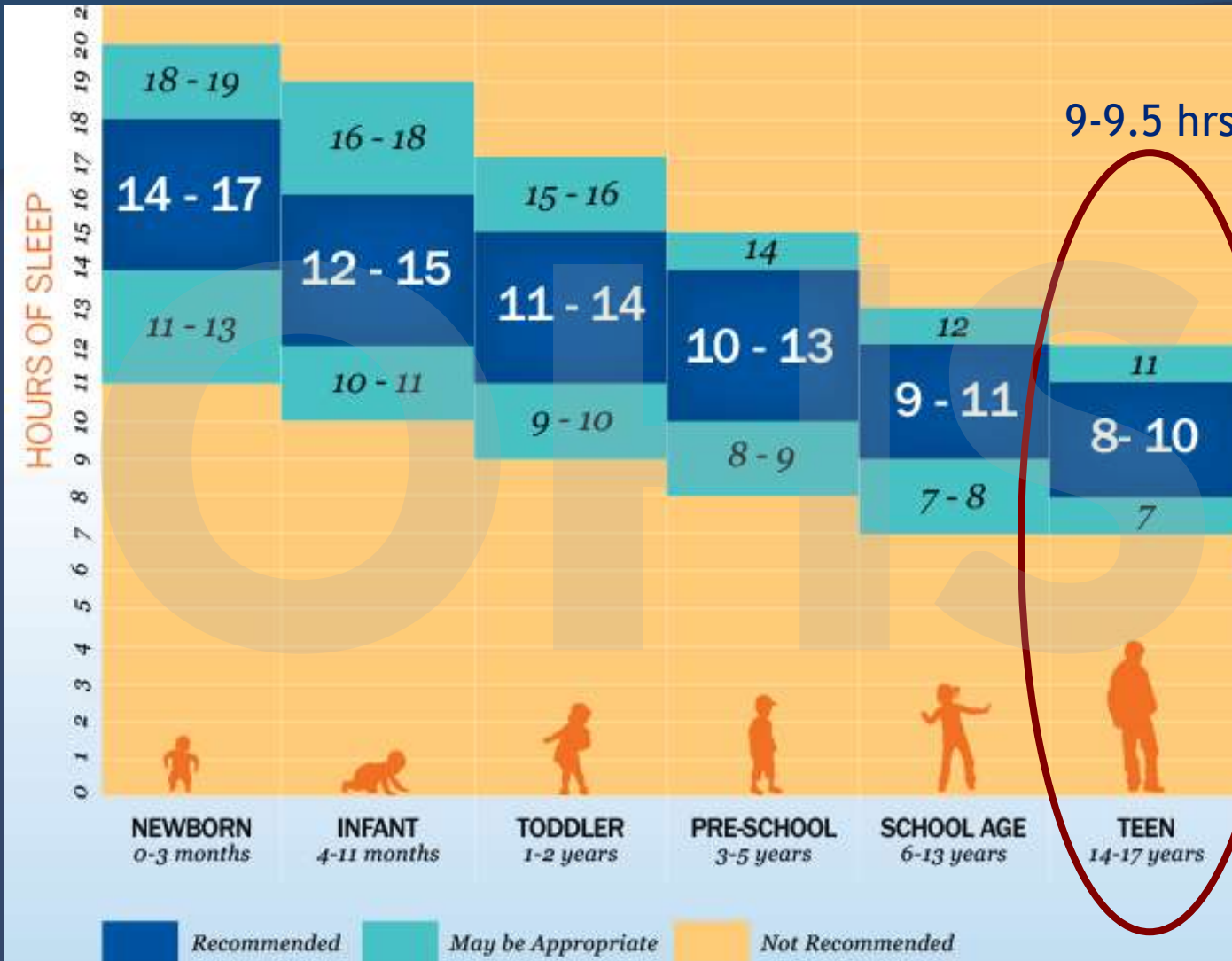
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OBJECTIVES:

- Support parent mental health and improve infant and toddler sleep.
- Master diagnosis of Behavioral Insomnia and provide office based intervention for parents.
- **Maximize adolescent sleep despite COVID 19 shutdowns.**

How much sleep do teens need?



- Sleep should be sufficient to:
 - Allow awakening without an alarm
 - Maintain a consistent amount of sleep through the entire week
 - Prevent daytime sleepiness



Brief Communication

The Impact of COVID-19 Related School Shutdown on Sleep in Adolescents: A Natural Experiment ☆

Gruber Reut PhD ^a, Sujata Saha M.Ed ^b, Gail Somerville M.Ed ^c, Johanne Boursier B.Ed ^d, Merrill S. Wise M.D. ^e

- Qualitative study between April 28 and June 3, 2020 with 45 adolescents using one-on-one semi-structured phone interviews to explore:
 - *Pre- and during-pandemic sleep schedules*
 - *Duration and quality of their sleep*
 - *Daytime sleepiness and their methods of waking up.*
- 32 girls
- Mean age 13.5 yrs (SD 1.9)
- 96% Caucasians; 2% Asian; 2% multiethnic

Following the outbreak of the COVID-19 pandemic in 2020, high schools closed or transitioned to remote teaching.

School day started at **10AM** with 30 minute subject specific sessions in which students were assigned tasks they had to complete online until noon.

- The majority of the participants reported that since school shutdown their sleep improved in quality and/or duration and that their sleep schedule had been delayed by about 2 hours (they went to bed later and woke up later).
- They cited not having to wake up early and lower school-related stress as the main reasons for these changes.

- 55% of the participants described being sleepy during the school day **before the pandemic** and attributed this to their need to wake up early to get to school and to getting less sleep.
- 78% reported that under the pandemic shutdown they were **not sleepy** and they attributed this primarily to getting more sleep.

- During the pandemic most participants reported waking up naturally; a few cited being awakened by a parent or alarm.



- Allowing adolescents to follow their naturally delayed sleep pattern by delaying school-start time could be a feasible, affordable and efficient way to improve their sleep health.
- This is expected to improve their resilience in the face of the challenges and stress caused by COVID-19.

OPPORTUNITIES

- Strong 'evening types' may benefit from greater flexibility afforded by home learning.
- More opportunity for obtaining sufficient sleep since less time is spent traveling to and from school or engaging in social and extracurricular activities.
- No longer have early school start times
- Can maintain a schedule more aligned to their endogenous circadian rhythm, in turn also reducing social jetlag (given more consistency between weekday and weekend sleep)

14 year old male with ADHD

- 9th grade distance learning
- Schedule is a mess.
- On and off school work throughout the day.
- Catching up on homework from 9-11 pm.
- Unclear what he is getting done during the day, parents are at work.
- Not participating in basketball this winter.
- How can we best support him?



ORIGINAL ARTICLE

Parents still matter: the influence of parental enforcement of bedtime on adolescents' depressive symptoms

Parent-enforced bedtimes—along with later school start times—are the greatest predictors of sleep duration, daytime energy level, and depressive symptoms.

More than 50% of parent respondents reported no specific or enforced bedtime rules, consistent with rates measured in previous research across families in the US.

Evening screen time and caffeine consumption did not, contrary to the researchers' hypotheses, significantly affect teenagers' sleep duration over the course of the study.



Sleep
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SLEEPJ, 2020, 1–11

doi: 10.1093/sleep/zsz287

Advance Access Publication Date: 29 November 2019

Original Article

Positive Outcomes from Later School Start Time

- Minneapolis study, 1997–1998 school year:
- Assessed more than 18,000 high school students before and after the district's school start time changed from **7:15 AM** to **8:40 AM**:
- Similar bedtime, resulting **increased sleep time**:
 - Improved attendance rate
 - Less tardiness
 - Students more “calm” and less tired
 - No improvement in grades
 - Improvement in teacher satisfaction
 - Fewer visits to the campus health center

PERFECT STORM FOR ADOLESCENT SLEEP

DISRUPTED SLEEP

Lethargy

Increased napping

Increased screen time

LIMITED ACTIVITIES

Lack sports Participation

Lack of creative activities

Lack of part time employment

ISOLATION

Separation from friends, romantic interests

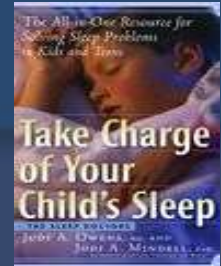
24/7 proximity to caregivers limiting autonomy

14 year old male with ADHD

- **ASK:**
How is sleep going? Do you have a routine?
What time is bedtime and wake time?
Weekends?
- Are you waking without an alarm?
- **REASSURE:**
 - Later bedtime is OK: Keep scheduled wake time on weekdays and weekends. Make sure you are waking without an alarm.
- **RECOMMEND:**
 - 30 minute wind down time before bed without electronics
 - Use bed for sleep, sleep only in the bed.
 - Parent involvement in bedtime, regardless of age.



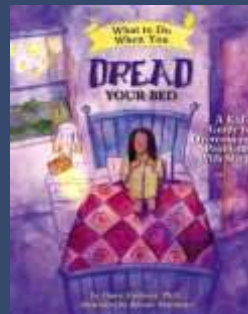
Take Charge of Your Child's Sleep, Jodi Mindell and Judith Owens



Sleeping Through the Night, How Infants, Toddlers and Their Parents can get a good night's sleep, Jodi Mindell



What to do when you Dread your Bed, Dawn Heubner



References

- *A Clinical Guide to Pediatric Sleep*, Mindell and Owens
- *Principles and Practice of Sleep Medicine, 4th Edition*. Kryger, Roth, Dement.

