

SCOTT NOYES EMPOWERING PROGRAMS

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Helping Children Develop

Healthy Sleep Patterns

The results of children not getting enough sleep are astonishing. Sleep deprivation can have serious effects on physical health and mental impairments. Inadequate rest impairs our ability to think, handle stress, maintain a healthy immune system and moderate our emotions. The loss of one hour of sleep for a child each night is equivalent to two years of cognitive maturation and development. In addition, sleep-deprived people fail to recall pleasant memories yet recall gloomy memories just fine. This presentation will review the facts about the importance of sleep and how to help children establish and maintain healthy sleep habits.



The Components of Sleep

When people sleep, they cycle between rapid eye movement (REM) sleep and non-rapid eye movement (NREM) sleep.

In REM your eyes move around fast, you don't move your body much, and you dream. REM is light sleep and the stage when your infant or child is most likely to wake up.

NREM sleep is deep sleep.

In normal sleep, a child cycles between light sleep and deep sleep. Each light sleep stage is a time when the child is more likely to wake up.

Your child is getting enough sleep if they,

- can fall asleep within 15 to 30 minutes;
- can wake up easily at the time they need to get up without the need to constantly remind them to get up; and
- are awake and alert all day except during the midday nap period.

Possible causes if your child is waking often,

- Separation anxiety
- Uncomfortable pajamas or scratchy tags
- A formula or food sensitivity or allergy
- Gastro-esophageal reflux (GER)
- Airborne allergens
- Colic
- Pain, such as from an earache abdominal gas, or teething. If the waking is due to pain, your child may not settle even if you are there to comfort them.
- Itching from pinworms
- A urinary tract infection (bladder infection)
- Discomfort, such as too hot, too cold, thirsty, hungry or a wet bed
- Being in a pattern of waking
- Being in a light phase of sleep so that a noise causes the child to be fully awake

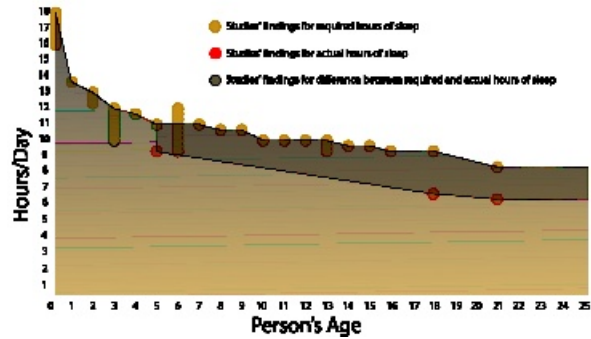


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Age & Required Sleep vs. Actual Sleep Circadian Rhythm - “Biological Clock”

A circadian rhythm is a roughly 24-hour cycle in the biochemical, physiological, or behavioral processes of living entities. Circadian rhythms are adjusted to the environment by external cues, the primary one is daylight. Circadian rhythmicity is present in the sleeping and feeding patterns. There are also clear patterns of core body temperature, brain wave activity, hormone production, cell regeneration and other biological activities.



Sleep-Shift Affects Pre-Kindergartners

Most young children are allowed to stay up late on weekends. Researchers discovered that the sleep-shift factor of 1-hour is correlated with performance on a standardized school-readiness test. Every hour of weekend shift costs students seven points on the test.

Research shows that less sleep is associated with higher risk of being overweight.

Sleep loss increases the hormone ghrelin, which signals hunger, and decreases its metabolic opposite, leptin, which suppresses appetite.

We live in a very sleep deprived society

Sleep deprived children (and adults) have more trouble controlling their emotions. The part of the brain that helps us to control our actions and our response to feelings is affected greatly by lack of sleep.

Not getting enough sleep can also lead to behavior problems, attention problems, and not doing well in school. Children who don't get enough sleep are also more apt to hurt themselves.

Tired Children are Inattentive in Class

Sleep loss debilitates our body's ability to extract glucose from the bloodstream. Without this stream of basic energy, one part of the brain suffers more than the rest: the prefrontal cortex. This area of the brain is responsible for "executive function."

Among these executive functions are the orchestration of thoughts to fulfill a goal, to predict outcomes, and sense consequences of actions. Tired people have difficulty with impulse control, and their abstract goals like studying take a back seat to more entertaining diversions.

A tired brain perseverates; it gets stuck on a wrong answer and can't come up with a more creative solution, repeatedly returning to the same answer it already knows is erroneous.

The emotional context of a memory effects where it gets processed. Negative stimuli get processed by the amygdala; positive or neutral memories get processed by the hippocampus. Sleep deprivation hits the hippocampus harder than the amygdala.

The result is, sleep-deprived people fail to recall pleasant memories yet recall gloomy memories just fine.

Sleep Apnea

Apnea means having short pauses in the breathing pattern. The pauses in breathing are usually normal, but sometimes can be a problem. The usual cause of obstructive sleep apnea is enlarged tonsils or adenoids that block the upper airway when the child is sleeping.

The nighttime manifestations of OSA in children include, habitual loud snoring; labored breathing; and disrupted sleep. Breathing pauses, apneas, may or may not be noticed. Parents sometimes notice that their children are sweating, or are sleeping in unusual positions.

Sleepy Children get Clumsy

Preschoolers who go more than 8-9 hours without sleep are 86% more likely to end up in the emergency room because they get clumsy.



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Sleep Deprivation is Cumulative

We are not able to “make it up.” The cost to the immune system, health, and weight control is enormous.

“75% of challenging behaviors will begin to disappear when children get enough sleep. Unfortunately, it is not a cure-all. There are many fuel sources for challenging behaviors.” - Mary Sheedy Kurcinka, *Sleepless in America*

Missing Sleep = Missing Information

During sleep your brain is re-coding what was learned that day.

When we miss one hour of sleep even the hardest lessons of the day are not coded.

Lack of sleep effects...

- **Mood** - increase in negative mood, decrease in positive mood. Inability to cope with stress.
- **Behavior** - hyperactive, oppositional, impulsive.
- **Cognitive Abilities** - pre-frontal cortex is responsible for executive function. Much less likely to be focused, attentive, able to predict consequences.

Lack of enough sleep can cause life long consequences. Being overtired can change the way a child’s brain is wired. Sleep restriction can cause as much damage as lead exposure.

The trouble is you can’t just sleep off the problem by making up for lost sleep later. Brain construction occurs when the child is asleep. Sleep deprivations in 4-6 year olds with emotional problems have the same issues 6 years later.

Nightmares vs. Night Terrors

	Night Terrors	Nightmares
Time of night	Early, usually within 4 hours of bedtime	Later in the night
How child acts	Confused and disoriented	Scared and upset
Response to parents	Doesn’t know parents are there, can’t comfort	Can be comforted
Memory of event	Usually none	Can remember dream
Return to sleep	Usually quick, unless fully awakened	Often delayed by fear
Sleep stage	Deep non-REM sleep	Light, REM sleep

Sleep-Onset Associations

Whatever your child connects with falling asleep, like being rocked, fed, or sucking their thumb, is called a sleep-onset association. When they wake up, they will need that thing to be able to fall back to sleep.

To help children go back to sleep on their own then you can encourage sleep-onset associations that do not involve you.

When you put your child to bed, you can rock or feed your child to make them sleepy, but stop before they actually go to sleep. Put your child to bed when they are still awake so they learn to go to sleep without you there.

Separation Anxiety

Separation anxiety is a very common reason for children under three years to cry at night. Around 9 months children learn that their parents exist even if they can't see them. The confidence to be able to feel secure when their parents are not there is still developing. You can tell if your child is waking due to separation anxiety because if you are nearby to reassure them, they will settle back to sleep.

For older children, you can put a foam mattress and sleeping bag on the floor near your bed, so they can come in and sleep near you if they need nighttime reassurance.



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Transitional Objects

To help prevent separation problems at night, when your child is between four months and a year old, give them a transitional object like a blanket, doll or other favorite item. Then when they wake up, having that object there will comfort them and help them go back to sleep.

A good night's sleep begins in the morning,

- Start day with regular wake time, even on weekends. Children only have 15-30 minute wiggle room.
- Slow down in the morning. Start the day with a state of calm.
- No TV in the morning. With TV there is no clear message, "It is time to be awake."
- Get outside or let the light in.

Babies sometimes groan and move around, or even cry out during REM sleep.

Waiting a little before you go to them will help give them a chance to fall back into deep sleep on their own.

The DO's and DON'Ts

DO - Make bedtime a special time & use a routine

A time for you to interact with your child in a way that is secure and loving. Be firm and go through a certain bedtime routine that your child is used to. At the end of that routine the lights go off and it is time to fall asleep.

DO - Find your child's ideal bedtime

In the evening, look for the time when your child really is starting to slow down and getting physically tired. That's the time that they should be going to sleep, so get their bedtime routine done and get them into bed before that time. If you wait beyond that time, then your child tends to get a "second wind." At that point they will become more difficult to handle, and will have a harder time falling asleep.

DO - Keep to a regular daily routine

The same waking time, meal times, nap times and play times will help your child feel secure and comfortable. This helps to create a smooth bedtime. Children like to know what to expect.

DO - Use a simple, regular bedtime routine

It should not last long and should take place primarily in the room where the child will sleep. It may include a few simple, quiet activities, bath, cuddling, saying goodnight, and a story or lullaby. The kinds of activities in the routine will depend on the child's age.

Make sure the sleep routines you use can be used anywhere, so you can help your child get to sleep wherever you may be.

DO - Consider using "White Noise"

Some children are soothed by the sound of a fan running or a radio set "off station." This "white noise" not only blocks out the distraction of other sounds, it also simulates the sounds babies hear in the womb. Small, portable white noise machines with a variety of different sounds are available for around \$50 - \$90.

DO - Keep active

Make sure your kids have interesting and varied activities during the day, including physical activity and fresh air.

DO - Use light

Keep lights dim in the evening as bedtime approaches. In the morning, get your child into bright light, if possible take them outside. Light helps signal the brain into the right sleep-wake cycle. Be cautious of TV or other screen exposure at night.

DON'T - Use a bottle of anything except water

Never soothe your child to sleep by putting them to bed with a bottle of juice, milk or formula. Water is okay. Anything other than water in the bottle can cause baby bottle tooth decay.

DON'T - Start solid foods earlier

Don't start giving solids before about 6 months of age. Starting solid food sooner will not help your baby sleep though the night. In fact, if you give your baby solids before their system can digest them, they may sleep worse



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because they have a tummy ache. The American Academy of Pediatrics says that breast milk or formula is all a baby needs to eat until six months of age. Contrary to popular belief, a heavier baby or a baby with a stuffed-full tummy is not more likely to sleep through the night.

DON'T - Put toys in the bed or crib

It's best to keep your child's bed a place to sleep, rather than a place to play. Toys in the bed can be distracting from the task at hand, sleep. Transitional objects, like a favorite doll, or a security blanket, are fine and can help with separation issues.

Babies under 4-6 months should have an empty crib to prevent suffocation.

DON'T - Use the bedroom, naps, or going to bed early as a threat

Bedtime needs to be a secure, loving time, not associated with punishment. It is important to teach children that bedtime is enjoyable. If the feeling around bedtime is a good feeling, your child will fall asleep easier.

DON'T - Allow Caffeine

Don't give your child foods or drinks with caffeine in them, like hot chocolate, tea, cola, or chocolate. Even caffeine earlier in the day will disrupt your child's ability to have restful sleep. Caffeine can take up to 8-hours to stop its effects.

DON'T - Permit TV viewing

Don't let your child watch more than one hour of TV during the day, and none before bedtime. TV viewing at bedtime has been linked to poor sleep.

If your child has a TV set in their bedroom it is best to take it out. The presence of other screens, such as a computer or video game in a child's bedroom is also associated with poor sleep.

Additional Hints and Tips

- Keep meal times the same even on weekends. Meals set the body's clock.
- Siesta, have some down time built into the child's day preferably around 1:00 – 4:00.
- When possible give baths before dinner, so there is enough time to cool down, become less excited.
- Begin slowing down at dinner, dim lights, lowering the volume of voices, quite activities.
- Try to catch the window for sleep (children looking tired) to prevent the "second-wind."

Ferber Method - an adapted "cry it out" approach.

In this approach, you wait a little longer each time your child wakes up and cries before you go in to comfort them. It is not recommended until after about 12-18 months of age. It is important to form strong attachments in the first year of life. Letting a baby cry uncomforted may interfere with that process.

Modified Ferber Method

This is when one parent goes in to the crying child every five to ten minutes (rather than waiting longer each time) until the child falls asleep. The idea is that the child will need less and less time each night to get to sleep. After going through your bedtime ritual, if your child cries wait five to ten minutes before you go back in to comfort them. While there you say almost nothing, just briefly reassure your baby that you are there. Don't give a bottle, pick the baby up, or play with your child. Keep checking on your child every five to ten minutes as long as they cry. This can be used at bedtime and if the child wakes in the night.

Camping-Out Method

Night 1

Sleeping on couch cushions next to child's bed all night

Night 2

Sleeping on couch cushions next to child's bed until she is asleep

Night 3

Leaving couch cushions next to child's bed but sleeping in your own room



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The March Method

When the child leaves his bedroom, without any additional energy then absolutely necessary, he is walked back to his bedroom. "It is time for you to be in bed sleeping. Good night."

Back to Sleep

Healthy babies should be put down to sleep on their backs to lower the risk of SIDS. Be sure all your baby's caregivers are aware of the safe sleep guidelines.

Co-Sleeping - Pros

Crib or Child's Bed	Parents' Bed
<p>A restless baby is less likely to disturb parents, and vice versa.</p> <p>It's easier for parents to be intimate at night.</p> <p>Sleeping independently is valued in American culture.</p> <p>Parents get a break from time with baby to "recharge their batteries."</p>	<p>Parents don't have to get up at night to soothe or nurse baby, and can soothe baby back to sleep without anyone fully waking.</p> <p>Working parents can spend more time with their child.</p> <p>Sharing sleep can help foster a strong attachment.</p> <p>The time your child will spend sharing sleep with you is very short in the big picture.</p> <p>Around the world, the norm is for babies to sleep with their parents, and, some would say, it is the "natural" way to sleep.</p>

Co-Sleeping - Cons

Crib or Child's Bed	Parents' Bed
<p>Parents have to get up at night to soothe baby.</p> <p>Your baby may be very upset and difficult to soothe back to sleep by the time you wake and go in to them.</p>	<p>It may become difficult to transition child to their own bed until age 2-4, if they still sleep in parent's bed after about age 6 months.</p> <p>Sleep-sharing creates a sleep-onset association that involves the parents (but parents who enjoy sharing sleep do not view this as a negative).</p> <p>Both parents must be committed to the arrangement, or it can cause conflict.</p>

Our job is to protect the importance of sleep especially in our children.

Be especially careful to model healthy sleep behaviors.

There is a connection between mom's mood and baby's sleep.

It is our responsibility to put our child to bed, but it is your child's responsibility to go to sleep. As with all responsibilities there is a learning curve that needs to be nurtured.



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