Sleep Tight (Without the Fight): Helping Your Child Get a Better Night’s Sleep

By Dennis Rosen, MD

Table of Contents
  Introduction
    Chapter One: Channeling Your Child’s Sleep Deficit
    Chapter Two: Getting Ready For Sleep
    Chapter Three: Falling Asleep
    Chapter Four: Staying Asleep
    Chapter Five: Anchoring Your Child’s Inner Clock
  References
  Acknowledgements

To Vered, my Eshet Hayil

Introduction
If you are reading this book, it’s likely that you’re worried about your child’s sleep. Sleep is such an important part of our lives, yet one which we mostly take for granted until there are problems. When we don’t sleep well we function at a much lower level than usual, and the same is true for our children. When they don’t get enough sleep, or if their sleep is of poor quality, we almost immediately see how negatively it affects their behavior, mood, school performance, and energy levels. The more we learn about how essential sleep is to maintaining our physical, emotional, and mental health, the more we understand how important it is that our kids get a good night’s sleep.

Twenty to thirty percent of children suffer from sleep disturbances at some point in their lives, and many parents spend years struggling to help their kids overcome them. The good news is that this is often a lot more straightforward than it seems (especially at 3 AM!). To help your child successfully go to sleep night after night, it helps if you understand why people fall asleep and wake up when they do, and how those things which facilitate, prevent, and/or disrupt sleep can be controlled. In this short book, I’ll explain these things and then offer specific strategies that are designed to help your child sleep well. Of course, an easier bedtime routine will also mean fewer fights around bed and wake up times. Not only will your child get better sleep, you will, too.
In this book, I write about different aspects of sleep disturbances in children and adolescents, and review recent scientific discoveries in this area of health. Every chapter is full of practical advice which you should be able to implement easily and effectively to help your child sleep better. Almost all the children I see in my clinic at the Center for Pediatric Sleep Disorders at Boston Children’s Hospital have more than one issue that interferes with their sleep. This complexity is reflected in the clinical vignettes, and is likely the case with your child as well.

I mention this for two reasons. First, I hope to convince you that reading the whole book will be much more effective than merely skimming through it to try and find specific pointers for what might seem to be your child’s problem. All of it, ultimately, is relevant and it is only by approaching your child’s sleep holistically that will you succeed in improving it.

The second is to avoid confusion about why certain issues appearing in the vignettes aren’t always addressed in the discussions that immediately follow. To do justice to the various problems which many children (including, perhaps, your own) face, I’ve chosen to discuss them in a certain order.

I hope you find this book informative, useful, and entertaining. For more information, you can also check out my blog, Sleeping Angels, which is devoted to children and their sleep.

Chapter One: Channeling Your Child’s Sleep Deficit

Michael is an eight year old boy with a problem: he really doesn’t like going to bed when told to. According to his mother, Michael has “always been a problem sleeper,” and “has never slept well since the day he was born.” Although his bedtime is supposed to be eight-thirty, Michael typically complains that he’s not tired and uses all the tricks in the book to avoid going to bed. His parents are easily distracted by Michael's two younger sisters and only really begin to make serious efforts to get him into bed at nine-thirty. Even then, he will continue to play video games or to watch television in his bedroom, and doesn’t usually fall asleep before ten-thirty or eleven o’clock most evenings.

Over the last two months waking Michael up for school has become an almost daily struggle for his parents. Michael’s parents recently met with his teacher to find out if perhaps there were any social problems such as bullying which might be causing him to try and avoid school. His teacher denied this, though she did mention that she’d been noticing increased behavioral problems of late. She had asked them if they’d considered having him screened for attention deficit and hyperactivity disorder (ADHD).

When Michael comes home from school he seems visibly tired and out of sorts. His mother has stopped scheduling play dates for him on school days, and after finishing lunch he will often doze off in front of the television for between forty-five minutes and an hour and a half.

Michael’s mother is convinced that if only he were to get enough sleep at night, he’d do better at school, his behavior would improve, and he’d feel much better all around.

Sleep is a basic physiological need, no different, really, than breathing, eating and drinking. It is much more than just a period of rest from physical and mental activity: indeed, our brain’s metabolism during rapid eye movement (REM) sleep can be as high, or even higher, than it is during wake. Sleep is essential for the strengthening of learning and
memory, and plays an important role in maintaining emotional and physical health. Not getting enough sleep, or having it repeatedly interrupted, can cause a lot of things to go wrong.

**Why do we sleep when we do?**

Why are most of us more alert in the mornings than in the early afternoon? And why do some people have such a hard time getting up in the morning only to get a second wind in the evening?

The answer to these questions is that there are two main drives which affect how alert (or sleepy) we are. The first is the sleep deficit (also known as the homeostatic sleep drive). Our sleep deficit builds up the longer we go without sleeping over the course of the day, and lessens as we catch up on our sleep.

The second is our circadian sleep drive, determined by our internal clock and its rhythms. Our bodies have many of these rhythms, affecting not only sleep and wakefulness, but also changes in our body temperature, hormone production and release, digestion, and urine production. Our circadian sleep drive waxes and wanes at different points throughout the twenty four hour day. It turns on around our usual bedtime, becomes strongest at what is usually the middle of our night, and shuts off just after we wake up. It turns on again for a short while in the early afternoon (though nowhere nearly as strong as at night), which is why we often feel drowsy after lunch.
Getting your child (or anyone) to fall asleep at a designated time is much easier when his sleep deficit and circadian sleep drive combine to exert a high degree of sleep pressure (the sum of the two sleep drives). When his internal and external clocks are not aligned, it is a lot more difficult for him to fall asleep at what would otherwise be a perfectly suitable bedtime. This is exactly what happens when we're jetlagged. After travelling across multiple time zones, our internal clock and circadian sleep drive are out of sync with the external clock. This makes it difficult to fall or stay asleep at night (or remain awake during the day) in the destination city until both the internal and the external clocks are realigned with each other. Because it usually takes one day to adjust for each time zone crossed, jet lag often lingers on for several days.
Napping can make it hard to fall asleep in the evening

When your child’s sleep deficit isn’t big enough, his circadian sleep drive needs to be stronger in order to induce sleep, which happens later in the evening as it takes time to build up. This can happen if he sleeps in later than usual, or naps during the day. Simply put: napping resets the sleep deficit. If your child still sleeps during the day even though he no longer needs to, it makes it harder for him to fall asleep in the evening than if he hadn’t. Ditto if he’s still napping but does so for longer than he needs to. “But I’m not tired, mom!” he’ll complain when you try and send him to bed in the evening, and indeed, he really isn’t.

This is an especially common problem in preschoolers who get put down for a two-to-three hour nap at daycare, and then are simply not ready to go to sleep until much later in the evening than their parents feel is reasonable. Their sleep pressure just isn’t strong enough. And indeed, a recent study published in 2012 by Dr. Yoko Komada and colleagues at Tokyo Medical University looked at the association between daytime naps and bedtimes in children age two to five. The researchers found (no surprise!) a direct correlation between longer naps and later bed times.

Napping can also be a problem for older children and teens whose natural tendency to push back their internal clocks makes them more reliant upon their sleep deficit to fall asleep in the evening. When their bedtimes are moved back but their wake up times stay the same (because of school), they get less sleep overall, and it is harder for them to get up and get going in the morning. I’ll come back to this again in Chapter Five.

But not all napping is bad

This is not to say that all daytime sleep is bad. Dr. Almut Hupbach and colleagues at the University of Arizona found that napping within four hours of learning something new helps infants retain the newly acquired skills which are otherwise forgotten if they do not...
“sleep on it”. Still, there appears to be evidence that not all sleep is equal, and that shorter naps and longer nighttime sleep (when developmentally appropriate) may be better for the developing brain. Researchers from the University of Maryland, Johns Hopkins, and the Children’s Hospital of Philadelphia studied fifty-nine children age three to five and found that those napping less and sleeping more at night performed better on cognitive testing than those who took longer daytime naps. While the researchers were very clear that they could not determine cause and effect—the disappearance of the daytime nap in children at this age is, after all, itself a developmental milestone—the finding is intriguing.

Practical Ways to Channel Your Child’s Sleep Deficit
In order to help your child fall asleep more easily at the desired bedtime, enlist his sleep deficit by reducing (or eliminating completely, if developmentally appropriate) his daytime sleep. He can get most or all of his sleep at night and little or none during the day, or less at night and more during the day. Either way he’ll be fine: the choice is yours.

This is as true for preschoolers as it is for older children and teens. Many parents of middle- and high-school age kids see them staying up late most school nights because of homework, socializing, and extracurricular activities. Feeling sorry for their children, they allow (and even encourage) them to nap so that they won’t be as sleepy. The problem with this strategy is that it reduces their children’s sleep deficit and perpetuates the pattern of not being able to fall asleep in the evenings, staying up late, not getting enough sleep, and struggling with getting out of bed in the mornings. Instead of letting your older child nap, let him grow his sleep deficit so that his sleep pressure continues to build, leading him to tuck in at a reasonable hour. It is likely that as evening rolls around you will be pleasantly surprised to find that he wants to go to bed earlier than usual.

And please: feel very comfortable ignoring bad advice! We’ve all heard that it’s best to “let sleeping dogs lie,” often in the same breath as “never wake a sleeping baby.” That may be appropriate for canines, who can snooze up to eighteen hours a day, but not for kids, and certainly not for the child you’re trying to help fall asleep earlier rather than later. If your nine-month old takes three one-and-a-half hour naps during the day, he’s just not going to need as much sleep at night. Transition him to shorter, scheduled naps (for example: two one-and-a-half hour naps at ten AM and two PM), and wake him up even if he’d be otherwise perfectly content to keep on sleeping. Likewise, if your three year old son sleeps for three hours in the afternoon but refuses to settle down before ten PM, shorten his nap to one hour and awaken him when the time is up. Less sleep during the day = more sleep at night. He’ll be no worse for the wear.

If your child is napping at day care or preschool, speak with the staff about reducing or eliminating his nap entirely. This is especially true if you notice that he does just fine without napping and puts up less of a struggle with going to bed on weekends than on weekdays when he does nap. Because caregivers at many day care centers take advantage of enforced naptimes to catch up on other work, they may prefer not to have to deal with active children and be protective of their own quiet time. If this is the case, suggest instead that they allow him to lie down quietly with a book while the other children sleep.

If your child has already outgrown the need to nap, don’t let him regress unless there’s a really good reason, like being sick, for example. Did your ten year old stay up until 1 AM sleeping over at a friend’s house on a Friday night? Don’t allow him catch up on those lost

Sleep Tight (Without the Fight) 6_29_2012 Dennis Rosen
hours of sleep Saturday afternoon. Yes, he’ll be sleepier than usual, but also much more likely to fall asleep at his usual bed time in the evening, and there’s a much smaller chance of new and unwanted sleep patterns taking hold.

Sleep is sleep: car sleep is same as napping! This also holds true for dozing on the school bus, taking a nap in the school nurse’s office, and snoozing in front of the television. All these push the “reset” button on your child’s sleep deficit and interfere with his ability to fall asleep in the evening. While thirty minutes here, forty minutes there may not seem like much, they all add up, and you ignore these snippets of sleep scattered across the day at your peril. It’s kind of like telling yourself that it’s okay to eat broken cookies while dieting because they somehow don’t have as many calories. Eat enough of them, though, and your weight will go up instead of down. Likewise, let your child doze enough during the day, and he won’t be as sleepy in the evening!

<table>
<thead>
<tr>
<th>Age</th>
<th>Total sleep time (per twenty-four hour day)</th>
<th>Breakdown</th>
</tr>
</thead>
<tbody>
<tr>
<td>Newborns</td>
<td>16</td>
<td>Sleep broken up into short naps around the clock</td>
</tr>
<tr>
<td>Six months</td>
<td>12½</td>
<td>~9 hours/night + Two 1½ hour naps +/- One half hour nap in the late afternoon</td>
</tr>
<tr>
<td>Eighteen months</td>
<td>11½</td>
<td>9½-10½ at night + One 1-2 hour nap</td>
</tr>
<tr>
<td>Five years</td>
<td>10½-11 hours</td>
<td>All at night</td>
</tr>
<tr>
<td>Teens</td>
<td>9 hours</td>
<td>All at night</td>
</tr>
</tbody>
</table>

Do the math to make sure your expectations of how much sleep your child needs are reasonable. If he’s eight years old and waking up at seven AM, it’s very unlikely he’ll be even remotely ready to fall sleep at seven-thirty PM, no matter how nicely you ask (or how generously you try and bribe him). Just as you cannot force yourself to sleep without being sleepy, neither can your child. His total sleep requirement per day will remain more or less constant (though it will gradually change over time as he develops and matures). His daily sleep needs are dictated by his brain, and aren’t anything he has conscious control over.

If you’re unsure about how much your child’s sleep needs are, try keeping track of his sleep over the course of a week or two, especially during school vacation. This can be very revealing (and useful). It is best done by plotting out on a graph the hours your child sleeps across the twenty-four hour day, as well as commenting on any changes you notice in his behavior. By sleep, I mean any time your child is asleep, whether napping, while in the car, at daycare, and (of course!) at night. Doing this will give you a very good sense of how much sleep your child’s brain needs, and make it much easier for you to calibrate your expectations and demands. This doesn’t mean that you can’t ask him (and the rest of the household) to start settling down at a certain time in the evening. It will, however, prevent

Sleep Tight (Without the Fight) 6_29_2012 Dennis Rosen
a lot of back and forth with a child who’s been tucked into bed too early and who won’t stay put because he’s bored and simply isn’t able to fall asleep.

Another way to avoid this from happening is by encouraging your child to read to himself or to play quietly in his dimly lit bedroom if he’s not quite ready for sleep even though it’s his bedtime. This will let him unwind without becoming overstimulated. Even if he hasn’t yet learned to read, letting him look at the pictures and make up his own stories based upon what he sees is a great way to link reading with bedtime, and to foster a love of books which will last a lifetime.

Keep your child on a regular schedule with fairly fixed bed and wake up times (weekdays, weekends and vacations) so that his circadian sleep drive can effectively combine with his sleep deficit to exert maximal sleep pressure at bedtime. While many people have no problem with sleeping in an extra hour or two on the weekends, some have a natural tendency for their internal clocks to “slow down” and push everything later. They only realize that this has happened when they’re suddenly expected to wake up at the usual time and struggle with “Monday morning jetlag.” Maintaining a regular schedule seven days a week keeps the circadian sleep drive synchronized with the sleep deficit, focusing the sleep pressure on bedtime and will help your child fall asleep with greater ease.

**Chapter Two: Getting Ready For Sleep**

Rachel is vivacious fourteen year-old with a lot going on in her life. She is in ninth grade and getting good grades, though she finds the one-to-two hours of homework she has to complete each night more burdensome. This is partly because she is an avid dancer and attends between three and four lessons and rehearsal sessions a week which usually run until eight PM, meaning she only gets home at around eight-thirty. When she breaks for supper at her dance studio, she buys herself a diet cola to drink with her sandwich. Between homework, watching TV and videos on YouTube, connecting with her friends via Facebook, text messaging, phone and Skype, she usually only makes it to bed between eleven and eleven-thirty most school nights. While she is supposed to wake up at six-thirty so that she can catch the seven-twenty bus, she takes full advantage of the snooze button on her alarm clock, often dashing out the door at the last possible moment to catch the school bus without having eaten breakfast.

Rachel’s mother is concerned that Rachel isn’t getting enough sleep, and that this may be adversely affecting her school performance (though her grades continue to be good) as well as her emotional health. Noting that Rachel has been moodier lately “even though I know she’s a teenager,” her mother wonders how she can help Rachel get to sleep earlier, especially on school nights.

While most of us know that adults need eight hours of sleep per twenty four hour day, sleep patterns and requirements in children are much different and vary considerably both in distribution and the total amounts needed at different ages and developmental stages. Newborns typically sleep sixteen hours a day, broken up into short naps around the clock. By age six months, most babies sleep about twelve and a half hours a day, mostly at night with another two-three hours of sleep divided between two naps. At eighteen months of age, most kids get about eleven and a half hours of sleep, including one afternoon nap that lasts one-two hours. Most kindergarteners are completely done napping and get by with
between ten and a half and eleven hours of sleep at night. Teens need just over nine hours of sleep, and this gradually decreases as they go through puberty and reach adulthood.

What teens need, however, is usually much different than what they actually get. Eighty percent sleep less than the recommended nine hours. Many kids plod through the week sleeping much less than their brains actually need, and then try to make it all up on weekends. This, it turns out, is not a great strategy. For one, it can uncouple your child’s internal and external clocks and cause her to have significant difficulties waking up during the week. It also does not solve some of the more fundamental problems associated with chronic sleep deprivation.

Why is sleep so important?
According to a study published by Korean researchers in the *Archives of Pediatric and Adolescent Medicine*, children who slept significantly longer on weekends than school days had more attention problems than those who maintained a more balanced schedule. Not getting enough sleep is bad in many other ways as well. Scientists at the University of California, Berkeley found that sleep deprivation impairs people’s ability to distinguish between facial expressions of anger and happiness. According to work done by psychologists Albert Mehrabian and Susan Ferris, ninety-three percent of interpersonal communication is non-verbal. If you are unable to “read” others correctly, it’s much more likely there’ll be misunderstandings in your interactions with them. This is of special concern in children who are on the autism spectrum, and suggests that improving their sleep may have a beneficial effect on their emotional intelligence and social skills.

Insufficient sleep weakens the body’s immune system. Dr. Sheldon Cohen and colleagues at Carnegie Mellon University in Pittsburgh found that adults averaging fewer than seven hours of sleep a night over a fourteen day period were almost three times more likely to become ill after exposure to the common cold virus compared to those who averaged eight or more hours of sleep a night. Our mothers were right: not getting enough sleep does run you down.

Sleep regulates the secretion of many different hormones and keeps them in check. These include ghrelin and leptin, which affect our senses of hunger and fullness. When their balance is disrupted, there is a higher likelihood of weight gain and obesity. This was confirmed by a large study published in *Sleep Medicine* in which more than twenty-three thousand Japanese adults participated over a seven year period. The researchers found that men who averaged fewer than five hours of sleep a night were thirty percent more likely to become obese than those who slept an average of between five and seven hours a night.

Sports performance also improves with sleep. Scientists at Stanford University studied how getting more sleep affected a group of college athletes. The athletes had better sprint times, and their basketball free-throw and three-point shot percentages improved by an average of nine percent when they slept more. Perhaps this will convince your budding young athlete to go to bed at a reasonable hour!

Different people have different sleep needs
As I’ve described, sleep needs and distribution change significantly across childhood. While the average sleep requirements described above can serve as a rough guide, what your own child actually needs may fall outside the ranges listed, in either direction. This is just as
true in adults. Some people sleep only six hours a night, even when on vacation, and do just fine. And then there are others who cannot function on fewer than eight and a half hours of sleep. It’s not that the former are superheroes and the latter are lazy. It’s simply a question of differences in how their brains work and what they need.

Practical Ways of Getting Ready For Sleep
Don’t let your child (especially your teenager) treat sleep like something to be done when she’s run out of other things to do. This can become the default as she tries to juggle her time between school, extracurricular activities, and her social life. But just as you wouldn’t consider letting her skip meals for three days because she was too busy with track meets and school projects, making sure her body’s sleep needs are met is no less important.

Prevent your child from becoming overscheduled by sitting down with her and critically reviewing what she’s committed to. It’s a mathematical impossibility to fit twenty-six hours into a twenty-four hour day. Seven hours of school, two hours of homework, three hours of soccer practice, two hours of travel, one hour for meals, and three hours for hanging out with friends and family, drawing, playing guitar, reading, internet, and watching television leave only six hours for sleep. Something has to give, and it shouldn’t be her sleep. Perhaps she should enroll in one less advanced placement class. Or maybe she needs to choose between soccer and basketball instead of doing both. Although the importance of down time in our fast-paced lives is often forgotten, it is no less important than any of the structured activities: in fact, in many ways it is more important. This is when your child is able to process the events of the day, to wonder at, explore and discover new things. This is when she can be creative at her own pace, and be a kid. So make sure she reserves enough time in her twenty-four hour day for homework, sports, music, chores, dance, socializing, reading, art, daydreaming, media… and for sleep.

Make dinner the transition point between daytime and evening. This will help your child ease into the mindset of completing any outstanding school work, beginning to unwind, and getting ready for sleep. Family dinners together are also a great opportunity to discuss the events of the day and to address any outstanding concerns or worries your child may have. When these are not resolved, they can generate anxiety that may, in turn, make it difficult for her to fall asleep.

Regular bedtime routines will prepare your child for sleep and help her to relax in anticipation of it. This is true at any age. In younger children, these routines can take the form of set activities, such taking a bath, followed by pajamas, teeth brushing, and reading together. In older children, this can take the form of completing homework and chores by a predetermined time, at which point the computer and cell phone need to be turned off, and they need to be in bed with only a reading light (if any) still on.

Reading to your child before lights out is a great habit to get into. It settles her down, provides you with focused one-on-one time with her and teaches her a love of books and reading. You can start doing this when your child is only a few months old, and continue reading to her long after she’s able to read on her own.

Keep your child from engaging in strenuous physical activity in the last couple hours before bedtime. This means not chasing your three year old around the house in an especially raucous game of cops and robbers, or signing your sixteen year-old up for a swim team that doesn’t finish its meets before ten o’clock on school nights. It takes a while...
for the adrenalin and all the other fight-or-flight reflexes to shut down, and nothing says “go to sleep” less than fight-or-flight! That said, it’s very important to encourage regular physical activity in your child (just not right before bedtime). Not only will this help prevent obesity and other physical ailments, as well as improve her stamina and mood, it may also improve the odds that she’ll get sufficient sleep, possibly by inducing physical fatigue. This was borne out in a study published recently in the American Journal of Preventative Medicine. The researchers surveyed more than fourteen thousand high school students and found that those who exercised more than an hour a day were more likely to get more sleep at night than those who were not as physically active.

Limit (or eliminate entirely if possible) media consumption during the last couple hours of the evening, and pay close attention to what your kids are watching in general. Dr. Michelle Garrison and colleagues from the Seattle Children’s Research Institute and the University of Washington published a study in Pediatrics which found that evening (and violent daytime) media use were associated with increased sleep problems in preschoolers. If your child’s habit of going back online to socialize when she’s ostensibly working on that social studies assignment keeps her from completing it and getting it in on time, consider shutting off the wireless internet router at a certain time each evening so that you aren’t constantly playing cat-and-mouse.

Taking a warm bath (or shower) before bed relaxes the muscles, causes a faster drop in core body temperature drop, and produces deeper and more restful sleep, as Harvard researcher Cynthia Dorsey and her colleagues have found. This can also help make the mornings less frenetic, with one less thing to do (showering) before leaving the house for school.

In the previous chapter I mentioned how helpful recording precisely how much sleep your child gets over a one-to two-week period (especially during vacations) can be to make sure that you aren’t demanding she sleep more than she is physically able to. Doing this can also be very useful to figure out exactly how much sleep needs to be budgeted for your child within the twenty-four hour day. Once you’ve determined your child’s sleep needs, you will then be able to set an appropriate bedtime (the time your child is actually in bed, in pajamas, with her teeth brushed and the overhead light turned off) which will satisfy her sleep needs. To set the bedtime, start with how much sleep she needs, subtract any daytime sleep she takes, and work backwards from her wake up time (usually externally determined by school or daycare).

Don’t let your teenager convince you that she is “too old to have an early bedtime.” According to research published by Dr. James Gangwisch from Columbia University, adolescents with parentally set bedtimes of midnight or later were twenty four percent more likely to suffer depression and twenty percent more likely to have suicidal ideation than those with bedtimes of 10 PM or earlier. It’s not a question of you being unnecessarily authoritative or unreasonable. It’s simply about looking out for your child’s wellbeing.

Many people are surprised to learn how many foods and beverages contain caffeine, including chocolate, sodas, blended coffee desserts, teas, and chai. A study by researchers from Massachusetts which was published in Health Education and Behavior found that ninety-five percent of a large group of high school students reported consuming caffeine, typically in the evenings. Teaching you child to avoid caffeine (and educating her about what foods contain it) is very important. Because the rate at which the body metabolizes caffeine varies considerably between individuals, its effects may linger far beyond what
you or she might think. Ask your child to avoid caffeine after 12:00 PM, and explain to her why so that she’ll buy in to the new policy (and won’t sneak Frappuccinos on the side). Also, review the caffeine content of her favorite drinks and foods with her so that you don’t discover three months later that even though she’s sworn off Chai, her newest biggest thing is munching on chocolate covered espresso beans.

<table>
<thead>
<tr>
<th>Sources of Caffeine</th>
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<tbody>
<tr>
<td>• Energy drinks such as Red Bull</td>
</tr>
<tr>
<td>• Many soft drinks, including: Coke, Pepsi, Mountain Dew, Dr. Pepper, Barq’s Root Beer</td>
</tr>
<tr>
<td>• Iced tea and iced tea drinks, such as Snapple, Arizona, Nestea</td>
</tr>
<tr>
<td>• Chocolate milk</td>
</tr>
<tr>
<td>• Hot chocolate</td>
</tr>
<tr>
<td>• Chai</td>
</tr>
<tr>
<td>• Coffee dessert drinks such as Frappuccino</td>
</tr>
<tr>
<td>• Coffee flavored ice cream</td>
</tr>
<tr>
<td>• Chocolate</td>
</tr>
<tr>
<td>• Some coffee flavored candies</td>
</tr>
<tr>
<td>• Certain medications such as Anacin, Excedrin</td>
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Many medications can have direct and indirect effects on your child’s sleep. These can include waking her up and making her sleepy at the wrong times; worsening sleep related breathing problems; increased restlessness; and inducing nightmares. If you think this might be the case, review your child’s medication list with her pediatrician and ask whether it might be possible to change either their timing or dosing. Some of the more common medications which can affect sleep include those used to treat behavioral and psychiatric disorders, seizures, allergies, and asthma.

**Chapter Three: Falling Asleep**

David is a really sweet four year-old whose unwillingness to sleep in his own bed has become a major source of discontent for both his parents. They’ve tried everything they could think of, without success. He no longer naps and his parents make sure to keep him on a regular schedule with a pretty fixed bedtime routine. But nothing seems to have helped. “He just loves to cuddle,” sighs his father.

After dinner, David takes a bath, brushes his teeth, and reads two or three stories with his dad. Once they’re finished, David’s dad tucks him in, kisses him goodnight, turns out the lights and exits the room, leaving the door open just a crack.

And that’s when the drama begins. Whether it’s because he’s thirsty, or needs another hug, or forgot to tell his mother something, or heard a noise (the list goes on and on...),

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David repeatedly emerges from his room, only to be quickly returned to bed by his increasingly frustrated parents. This back-and-forth can go on for more than an hour until David finally falls asleep in his own bed or in his parents’ bed if one of them is lying down and reading. If so, David’s parents carry him back to his own bed before they go to sleep, hoping not to see him again until morning.

That doesn’t happen.

Sometime after 1 AM, David will reappear in his parent’s bed, snuggled up between them. One of his parents (usually his mother) will return him back to his own bed, but he keeps on coming back and after a certain point, they give up and let him stay.

Because David happens to be a very restless sleeper who tosses and turns and kicks in his sleep, his mother usually winds up moving to his bed so that she can get a few hours of undisturbed sleep before getting up for work. Both parents are frustrated with this situation, especially David’s mother. She says that if David’s father were stricter, there wouldn’t be a problem. She observes pointedly that when David’s father is away on business, David seems to have no difficulties with staying in and sleeping in his own bed.

Most of the difficulties that younger children have with falling and staying asleep are behaviorally driven. These are known, appropriately enough, as behavioral insomnia of childhood. There are two types of behavioral insomnia of childhood. The first, sleep onset association disorder, is more common in infants and toddlers. It can develop if your child learns to associate falling asleep with the presence of a specific object or stimulus. The association becomes a requirement, almost an addiction, almost. Soon, if what he needs to fall asleep isn’t there, he has a much harder time doing so. (He will fall asleep, ultimately, but will require a higher measure of sleep pressure to overcome the annoyance and anxiety at not having what he’s used to having available.)

When your child “needs” something/someone to fall asleep
Objects your child may “need” to have so that he can fall asleep can include bottles, pacifiers, a certain doll or a special blanket. The stimulus can be inanimate, such as music, white noise from a fan, or movement generated by being pushed in a stroller. In most cases, though, the stimulus is physical contact with one or both parents. If your child can only fall asleep while nursing, being bounced around in your arms, or only when you lay down beside him and rub his back, he has a sleep onset association disorder. While it might not seem like such a big deal in the evenings, it can feel much more demanding when he awakens multiple times across the night and needs your physical presence to fall back to sleep.

Everyone stirs briefly multiple times across the night. Most people simply roll over and return to sleep without ever fully waking up. If your child can’t do this on his own, he will wake up fully. Once that happens, he’ll either cry until he gets what he needs to go back to sleep, or go looking for it himself. Many parents spend their nights rocking a crying baby back to sleep, counting themselves lucky if they too can get more than a few hours of shut-eye.

Setting firmer limits for your child
The other type of behavioral insomnia of childhood is known as limit setting disorder. Typically seen in somewhat older children, it is more common in boys. Limit setting disorder is present when your child tests (and bypasses) the rules you’ve set about going to sleep.

Sleep Tight (Without the Fight) 6_29_2012 Dennis Rosen
and staying in bed. As with David, limit setting disorder usually presents as repeated requests for “one more kiss/hug/story/drink of water,” and/or mid-night migrations to the parents’ bedroom and bed. Depending upon your perspective these behaviors can either be cute and endearing, or manipulative and exasperating. Often, there is significant disagreement between the parents, with one enjoying the snuggling in the middle of the night and the other parent not able to bear the kicking and interrupted sleep this causes. If this is the case, the child will often play one parent off against the other to get what he wants.

It is really important to stress that there is no objectively “right” or “wrong” way for children to sleep. Ultimately, what matters is what works for your family as a unit. And so if you decide you’d like the whole family to sleep together in one bed (once your kids are beyond infancy, that is, as co-sleeping with an infant can increase the risk of sudden infant death syndrome), there is absolutely nothing wrong with that. Many parents start their sleep clinic visits with me by saying “I know I’m doing this all wrong, but....” I tell them that it is only wrong if it’s not working. This is borne out by research as well. Recently, investigators at Columbia University reported in Pediatrics that they found no differences in behavior or cognition between toddlers who co-slept with their mothers and those who did not. But it also means that it is totally legitimate for you to decide that the current sleeping arrangements are no longer suitable (or are generating too much marital tension). You should feel very comfortable redefining the rules about how your family sleeps to your satisfaction, not guilty.

**Behavioral insomnia in children with special needs**

Some parents of children with special needs worry that changing the ground rules of how their children fall and stay asleep may be especially difficult and just not worth the struggle. However, an Australian study found that behavioral interventions to treat sleep onset association and limit setting disorders are very effective in children with attention deficit and hyperactivity disorder (ADHD). And a study published by researchers at Vanderbilt University showed similar improvements in the sleep and daytime behaviors of autistic children ages three to ten. This underscores the fact that although children with special needs (such as developmental delay, autism, chromosomal abnormalities, and neurologic and/or psychiatric disorders) may have different sleep patterns and requirements than typical children, they too will often benefit from behavioral interventions aimed at improving their sleep habits.

**Practical Ways Of Helping Your Child Fall Asleep**

It is very important to pay attention to your child’s sleep hygiene. Sleep hygiene means eliminating those factors which can impede or disrupt sleep. This is true at any age, and by removing obstacles to sleep, you’ll make it much easier for your child to settle down and fall asleep. Poor sleep hygiene can distract your child from the mounting sleep pressure which you’d like to make him fall and stay asleep. Poor sleep hygiene also makes it harder for some of the interventions used to treat the behavioral insomnias of childhood to take effect, and prolong the period it will take your child to adapt to the new sleep habits you’re trying to teach him.
Sleep Hygiene Checklist

- Eliminate caffeine intake by your child at least eight hours prior to bedtime
- Reduce your child’s exposure to bright light in the last two hours of the day before bedtime
- Keep your child’s bedroom dark, quiet, and at an ambient temperature
- Use a nightlight with a low intensity bulb (seven watts) that does not shine directly on your child, if one is still needed
- Reduce the intensity of your child’s reading lamp to forty watts or less
- Turn off the classical music you’ve been playing for him in the hopes it will lull him to sleep. It may awaken him if it plays continuously across the night, and if it turns off after a certain time, its absence may be keenly felt if he stirs and cannot fall back to sleep without it. When that happens, you’ll be the one who needs to come it and turn it back on again
- Remove video games, media players, cell phones and computers from your child’s bedroom
- Position your child’s alarm clock so that it faces away from the bed (and cannot easily be turned around). This can be very helpful if your child has trouble falling asleep at the designated bedtime and starts to stress out each time he sees that five more minutes have passed and he’s still awake.
- Insist that your child do his homework at a desk (or better yet, outside the bedroom), not in bed. When homework is done in bed, the associated stress doesn’t go away just because the books are closed. Instead, it can linger even after the lights are turned off and make it difficult for your child to unwind and fall asleep.
- Keep pets out of your child’s bedroom (and certainly out of his bed)! Dogs love to snuggle, and cats are notorious for taking short naps and moving around a lot. Caged rodents, such as hamsters and gerbils, are nocturnal and more active at night, making more noise
- Remove the television set from your child’s bedroom! Not only is television a huge distraction, it produces a lot of light and noise. In many cases it actually stimulates the viewer, and the content is often difficult to monitor, especially behind the closed door of your child’s bedroom. If all these aren’t reason enough, there’s also the issue of physical health. In 2007 French researchers reported that teenage boys with a TV set in their room were more likely to be overweight (and less likely to read) than their peers.

All interventions for breaking sleep onset associations involve putting your child to bed awake, without the associated object or stimulus, and letting him fall asleep on his own. You can still nurse him before bed, but stop the feed before he dozes off in your arms (or on your breast). Instead, place him in his crib while still awake so that he makes the transition from wake to sleep on his own. Likewise, you can still kiss your child goodnight, but don’t continue to rub his back until he’s fast asleep. Let him learn how to fall asleep unassisted.

Sleep Tight (Without the Fight) 6_29_2012 Dennis Rosen
This is not, however, meant to imply that your child is likely to accept this new way of falling asleep this without grumbling (or screaming). And that’s why you need to have a strategy in place for how to respond.

Make sure both parents agree on the goals and how they will be achieved before you setting out to teach your child new sleep habits. Consistency matters, and without it, the chances of success are very poor. Mixed messages are very confusing, and an adept child will quickly learn how to take advantage of them to get what he wants.

Breaking a sleep onset association requires patience and consistency. You also need to accept that no harm will befall your child during the process (this is true! An Australian study published in late 2012 in *Pediatrics* found no evidence that sleep training in infancy had any negative effects on the wellbeing of children, their parents or to the relationship between them). And yes, your child will be fine, even if he doesn’t stop crying for three hours the first night you try, or gets so worked up that he vomits. All you’re doing is teaching him some new sleep habits, and this can usually be successfully done over a period of several nights. Once your child has mastered the art of self-soothing, he’ll be just as happy as before. The big difference will be in how you feel (and function) once you begin to finally sleep through the night as well.

One method involves shutting the bedroom door behind you in the evening and not returning until the next morning, leaving your child in his room to cry for however long it takes him to fall asleep. While this will certainly work, it is quite harsh, and can generate a lot of stress for both you and your child. That is why I personally am not a big fan of this approach.

Another method, popularized by Dr. Richard Ferber, involves leaving your child’s bedroom after you’ve put him into his crib or bed awake and returning as needed at gradually increasing intervals to remind him he needs to go to sleep. By doing this you reassure your child that he hasn’t been abandoned while reinforcing the message that it’s time to go to sleep, and that he needs to do so on his own. The most important (and difficult) part is to not make physical contact with him when you come back into his room. You may need to draw upon all of your inner strengths to avoid picking him up when you go back in to his room and find him standing by the rails of his crib with outstretched arms calling for you with big heaving sobs, his face all teary and flushed, thick ribbons of snot flowing from both nostrils. But remember that this, after all, is exactly the behavior you’re trying to change. And no: the crying won’t cause brain damage, even if the bedroom walls fairly shake from the fury of his wailing. So don’t pick him up. Let him learn how to fall asleep on his own. It’s a valuable skill which will serve him well across his lifetime.

Another way to teach your child to fall asleep on his own involves remaining in his bedroom after putting him into bed, and remaining in his bedroom while staying seated in a chair facing away from his bed and not engaging with him. By doing this, you make it clear that you haven’t abandoned him, while at the same time letting him know that the day is over, you’re done playing, and it’s time for him to go to sleep.

In older children, you can substitute an active association (you) with a passive one (quiet reading on his own by the light of a dim reading lamp).

No matter which method you choose, you need to be consistent. If one of you breaks down after half an hour of screaming and reverts to the tried-and-true method of rocking your child to sleep on the glider, he’ll learn that thirty minutes of crying will get him what he wants, and that all he needs to do is pace himself. And since you’re reading this book, I’m

Sleep Tight (Without the Fight) 6_29_2012 Dennis Rosen
sure that you already know that most kids have no problem carrying on for half an hour at three AM until they get what they want.

Any child who senses that his parents lack the will to enforce their own rules will quickly learn how to use that to his advantage and do what he wants to do. If your child is not respecting the behavioral limits you’ve set, re-establishing your parental authority through setting and enforcing clearly defined rules about what is and is not acceptable is the key to changing this. As is the case with sleep association disorder, successfully treating limit setting disorder requires agreement on what these limits will be. If one of you is fine with your child sleeping in your bed and the other parent is not, you’ll need to resolve this ahead of time. Once you’ve agreed on the new rules, you both need to be consistent in your responses when he tests or flaunts them. And like everything else with child-rearing, you’ll need lots of patience until everyone has adjusted.

Redefining the behavioral limits you’re setting and actually changing your child’s behavior depends a lot on his age and developmental stage. For example: putting up a gate in the doorway of your kid’s bedroom (or two, if he’s a climber) may keep him from wandering out of his room when he’s three, but be utterly ineffective if he’s eight. Some kids are very skillful climbers, and require more imaginative solutions. More than one family I’ve cared for in my sleep disorders clinic has wound up sawing the bedroom door into two sections about two thirds up, creating a Dutch door. If your child is older, it is often possible to enlist his willing collaboration with the new rules in return for a small reward to be earned after several days of compliance with the new rules. This might be an iTunes gift card, hot chocolate with mom at Starbucks, or watching the new Pixar movie with dad.

Keep in mind that setting new rules about where and how your child sleeps, especially if he hasn’t slept in his own bed for several months or even longer may provoke significant anxiety. If this is the case, you will need to be prepared for a longer transitional period. You may need to gradually move him out of your bed and on to a mattress placed on the floor alongside it. As he adjusts, the mattress can then be gradually moved away from the bed towards (and through) your bedroom door, down the hall and ultimately back to his room. Alternatively, you may need to sleep on a mattress on his bedroom floor for a period of time to re-acustom him to sleeping in his own bed. Once he is used to sleeping his bed again, you can gradually start to absent yourself from his room. If sleeping alone is more of a problem than whom he sleeps with, having him share a room with a sibling can be an easy fix.

Distinguishing between manipulation and true anxiety isn’t always easy, but there are clues which can help you with this. For example: how does your child do on sleep overs, both at home and at the homes of friends and family? Is he suddenly able to fall asleep in his own bed without difficulty, or to sleep in the attic with his friend without you hearing from him ever once? What happens when both parents go out and leave Grandma in charge? Does your child go to bed and stay in bed without a fuss? Or, as was the case with David, when one parent is away on travel, does your child’s sleep behavior change? All of these are less suggestive of true anxiety and more of a behavioral problem. Ask your child if there are other concerns or reasons for anxiety that prevent him from falling asleep and/or cause him to keep on coming out of his bedroom. These might include fear of burglars, monsters, or wild animals. He may simply fear being the last one awake in the house. If so, the solutions can be as simple as watching the “Home Alone” movies, using monster
repellants, or promising him that a designated family member will only go to sleep after making sure that he has already fallen asleep.

A word of caution: it’s important to remember that not all nighttime awakenings are behavioral in origin. Physical discomfort from colic, food allergies, gastric reflux, an ear infection, and/or any other acute illness may be the reason your child is waking up at night. Obviously, when he’s sick, he needs extra comfort and TLC, even if it causes some backsliding in the behaviors you are trying to modify. If you aren’t sure whether your child’s awakenings are behavioral or may indeed have a physical cause, talk to his pediatrician.

Chapter Four: Staying Asleep

Lindsey is a delightful third grader who loves to draw and dance. Over the last six months, however, her parents have become concerned about her snoring. They first noticed it when they went to Florida on a family vacation and all slept in the same hotel room. Her mother says that Lindsey “snored like an old man” and kept everyone else awake. Since then, her parents have been paying closer attention to how she breathes during her sleep, and have noticed that Lindsey will often stop breathing for a few seconds, gasp or snort, and then resume breathing again.

Lindsey’s parents note that she is a very restless sleeper and that she thrashes about a great deal. Not only does she sweat a lot at night (despite sleeping with just a sheet), she has also begun to wet the bed again after being dry at night for the last three years.

Lindsey’s parents are especially concerned because she seems sleepier and more irritable during the day, and her teacher has called a couple times to raise concerns about Lindsey’s increasing inability to focus and stay on task.

No, snoring isn’t cute. In fact, in many cases it can be a sign of obstructive sleep apnea. Affecting between two to four percent of children, obstructive sleep apnea is a condition in which the muscles that keep the throat open to allow air into the lungs during breathing relax so much during sleep that the throat narrows and collapses. Air can’t get in, and the child essentially chokes on her throat. This interrupts her breathing, and adversely affects blood oxygen and carbon dioxide levels. Obstructive sleep apnea is also very disruptive to sleep, causing the child to constantly stir, move and awaken in order to relieve the obstruction so that she can start breathing again.

Obstructive sleep apnea can cause high blood pressure, diabetes, and heart disease. It can also have profoundly negative effects on behavior, development, and cognition. Many children with obstructive sleep apnea have symptoms of attention deficit and hyperactivity that are very similar to those seen in ADHD. An important study published in the journal Pediatrics found that a group of children ages five to thirteen who had been referred for removal of the adenoids and tonsils to treat what in most cases had been a clinical diagnosis of obstructive sleep apnea had four times the rate of ADHD as a group of similar children without signs or symptoms of obstructive sleep apnea. When the researchers retested the children one year after surgery, half of the children no longer had symptoms of ADHD. Other studies have found similar improvements in school performance in children following the treatment of their obstructive sleep apnea.

While this may sound reassuring, in that it suggests that the consequences of obstructive sleep apnea in children are reversible with treatment, other studies such as one

Sleep Tight (Without the Fight) 6_29_2012 Dennis Rosen
published in Pediatrics in April 2012 suggest otherwise. Dr. Karen Bonuck and her colleagues found that parental report of persistent snoring, mouth breathing and pauses in breathing in children as young as six months of age was associated with a sixty percent higher incidence of behavioral difficulties at age seven, even after the symptoms had resolved. Other studies have found evidence of structural changes in the brain similar to those seen in adults with longstanding obstructive sleep apnea which do not reverse with treatment.

Obstructive sleep apnea is most commonly seen in children between the ages of three and six (when the tonsils and adenoids are largest and take up the most space in the child’s throat), and in overweight adolescents. Diagnosed by sleep study, the first line of treatment for obstructive sleep apnea in children is usually the removal of the tonsils and adenoids, which cures it in most cases. If surgery is unsuccessful, or cannot be done, the next treatment step usually chosen is the use of continuous positive airway pressure (CPAP). CPAP is a device which blows air at a fixed pressure into the throat through a hose and mask worn over the face. The pressurized air props the throat open and prevents it from collapsing.

Could your child have obstructive sleep apnea? Questions your child’s doctor might ask you.

1. Does your child snore? And is the snoring punctuated by periods of silence followed by snorting, gasping or choking?
2. Is your child’s breathing worse when she sleeps on her back?
3. Does your child need to sleep on more than one pillow so that she can breathe comfortably?
4. Does she tend to breathe through an open mouth, or sleep with her neck extended?
5. Does your child sweat a lot at night, to the point where the bed seems drenched? (Night sweats have many causes, including increased work of breathing)
6. Has your child started to wet the bed again after months of being dry at night?
7. Does your child wake up in the morning feeling refreshed, or not? Children with obstructive sleep apnea often do not feel refreshed after sleeping because their sleep is so disrupted. That said, it’s important to consider this in context of whether or not she is getting enough sleep (remember that eighty percent of teens aren’t getting enough sleep regularly).
8. Does your child complain of headaches in the morning?

Things that go bump in the night
Besides trouble breathing, lots of strange things may happen during your child’s sleep. These include sleep walking, sleep talking, confusional arousals, night terrors, and nightmares, and all of these are quite common in children. One large study published in Pediatrics by a Canadian group found that more than fifty-five percent of children talk in their sleep, more than seventeen percent have night terrors, and almost fourteen percent sleep walk. Known as “parasomnias”, a combination of Greek and Latin meaning “alongside sleep,” these typically occur in the first half of the night, when a child cycles out of deep sleep.

Sleep Tight (Without the Fight) 6_29_2012 Dennis Rosen
sleep and awakens briefly. Part of the brain remains asleep while other parts wake up, and you can actually see this when looking at the brainwave patterns of children who have parasomnias while undergoing a sleep study. The simultaneous presence of multiple states of consciousness results in behaviors which can be strange and even quite frightening. While the child seems to be awake, she is not fully present, and if she is agitated or distraught it can take as long as fifteen to twenty minutes for her to either fully awaken fully or go back to sleep.

Because parasomnias occur while most of the brain is still asleep, children who have them typically have no recollection of them the next morning. Some parents find their sleepwalking child wandering aimlessly around the house, and need only to guide her back to bed where she quickly goes back to sleep. Others awaken to the piercing sound of their child’s screams, run into her room and find her crying inconsolably for ten to twenty minutes before she calms down and goes back to sleep. During this time, she seems not to recognize anyone or her surroundings. This is characteristic of night terrors, which are quite different from nightmares. Nightmares emerge out of rapid eye movement (REM) sleep, usually in the second half of the night. With nightmares, the child is able to describe in vivid detail what it was/is that frightened her upon awakening as well as the next morning.

For the most part, parasomnias are harmless (though there have been cases of sleepwalking children leaving their homes and being found wandering quite a distance away). If your child has a parasomnia or confusional arousal, there is no need to wake her up. Instead, it is important to make sure that she is safe and does not inadvertently harm herself by running into a coffee table or falling down the stairs.

Certain things can trigger parasomnias, specifically those which either prompt awakening (such as obstructive sleep apnea), or prevent the brain from fully submitting to sleep. This can happen when there is some uncertainty on the child’s part about what might be happening to her while she is asleep. For example: a child who falls asleep in one place (her parents’ bed) and is then transferred to another (her own bed) may not understand how that happened, be troubled by it, and try to stay awake to guard against it happening again. This is in many ways similar to how most adults don’t sleep as well when sleeping in a hotel as they do in their home. Here too, part of the brain remains vigilant to protect against someone walking in on them in what is fundamentally an unfamiliar environment.

Conversely, not getting enough sleep, or having an irregular sleep schedule, can increase the sleep pressure, resulting in part of the brain continuing to sleep after an awakening. Finally, there are likely genetic causes of parasomnias as well, as there is often a strong history of parasomnias in other family members. The good news is that most children who sleepwalk or have night terrors outgrow them before adolescence.
Wetting the bed

Bedwetting is very common in younger children, so common, in fact, that it is not considered abnormal before the age of five. It is more common in boys, and often runs in families. In the vast majority of cases, there is no underlying problem, though bedwetting can also be caused by anatomic abnormalities, bladder infections, chronic constipation, seizures, diabetes, and obstructive sleep apnea. Caring for a child who wets her bed requires a lot of patience, and no matter how frustrating it is to deal with the mess and the laundry, you have to remember that she has no control over it, and would be even happier than you were the problem to suddenly vanish.

<table>
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<tr>
<th>How common is bedwetting at different ages?</th>
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<tr>
<td>Three years old: forty percent</td>
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<tr>
<td>Five years old: twenty percent</td>
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<tr>
<td>Six years old: ten percent</td>
</tr>
<tr>
<td>Twelve years old: three percent</td>
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<td>Eighteen years old: one percent</td>
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Nighttime awakenings can also be caused by certain medical conditions. For example, one of the classic signs of poorly controlled asthma is a cough at night which wakes the child up. Researchers from Seattle Children's Research Institute and the University of Washington recently reported that asthmatic children between the ages of two and ten who were treated with a controller medication for their asthma had significantly fewer difficulties falling asleep and less daytime sleepiness. Post nasal drip is another common cause of night time cough, and can be brought on by poorly controlled allergies or sinus infections.

Eczema also causes difficulties in falling and staying asleep, and up to eighty percent of children with eczema have sleep disturbances because of it. As I’ve already mentioned,
insufficient and poor quality sleep can have many negative consequences, and indeed, a study published in the Journal of Clinical Sleep Medicine by an Australian group found that the sleep disturbances in children with eczema were to blame for their higher incidence of daytime behavioral problems.

**Practical Suggestions for Helping Your Child Stay Asleep**

Don’t ignore that snore! Talk with your child’s doctor about her snoring, especially if associated with snorting, gasping, and pauses in her breathing, and/or you or her teachers have noticed worrisome changes in her behavior or school performance.

Eliminate any exposure your child may have to cigarette smoke to reduce the likelihood of obstructive sleep apnea.

Encourage healthy eating and living habits for your children (and active weight loss if they are already overweight). These include regular exercise; elimination of juice, soda, chocolate milk, and other sweetened beverages; substitution of calorically dense snacks with fruits and vegetables. Meet with a nutritionist if you’re not sure how to do this yourself. Even though they may not be an effective short-range solution to your child’s obstructive sleep apnea, they are very important in promoting better long term health and preventing some of the other problems associated with overweight and obesity such as diabetes and high blood pressure.

Keeping your child with sleepwalking, confusional arousals, or night terrors safe needs to be your top priority, not waking her up. This means removing obstacles she may trip over, keeping second story windows secure, and/or installing effective barriers such as gates to prevent her from banging into things or falling down stairs. If you want to know when she is up and moving about, stringing some bells at the bedroom door can alert you if she leaves the room, as can installing an alarm triggered by an electric eye. Likewise, if you worry about her leaving the house while asleep, consider adding additional locks to the outside doors that require some thought to open.

Be patient with your bed-wetting child. Remember that no one wants it to stop more than she does. Restrict your child’s fluid intake in last few hours of the evening, and consider waking her up on schedule after a few hours of sleep to try and urinate so that she won’t wet her bed. Using an alarm can be a very effective tool for teaching your child to overcome the bed wetting. These attach to the child’s underwear and go off when they detect moisture. They can teach your child to recognize the sensation of imminent urination so that she learns to wake up before she actually does.

Even though you’re focused on her urination at night, don’t ignore the possibility of constipation. Hard stool in the rectum can press up against the bladder and diminish its function.
holding capacity. Make sure your child drinks plenty of liquid (in the morning and afternoon, not in the evening!) and eats food with high fiber content such as fruit and vegetables. Also, have her sit on the toilet every morning after breakfast to try and poop. This is often the best time to try, as the whole GI tract is very active then.

Ask your child’s pediatrician whether any of her medications could be causing her to have worse nightmares. Certain medications can make nightmares worse, including some used to treat depression and high blood pressure, and certain antibiotics. With the pediatrician, review your child’s other medical problems, (such as asthma, allergies, and eczema) to see if getting them under better control might improve her sleep. Likewise, if your child is having events that maybe suggestive of night time seizures (such as repetitive or localized movements or incontinence), discuss these with your child’s pediatrician.

Chapter Five: Anchoring Your Child's Inner Clock
Jonathan is a sixteen year old junior who would fit anyone’s definition of a “classic teen.” A rising musician who plays a wicked electric guitar, he stays busy making and listening to music, socializing, keeping up with schoolwork, and watching “How I Met Your Mother.” Rare is the night that he goes to bed before midnight, and depending upon how much homework he has, it is often much later.

During the last few months Jonathan’s parents have been having increasing difficulty getting him up and out of bed in the morning. They find themselves resorting to threats alternating with cajoling, and it can often take twenty five minutes before he finally rolls out of bed. He misses the bus at least once a week, and freely admits, to the horror of his parents, that he falls asleep in class two-three times a week. Needless to say, his grades have nosedived.

On weekends, Jonathan seems to have no problem staying out with his friends, and compensates for his chronic lack of sleep by sleeping in until around eleven AM on Saturdays and Sundays. His parents accept this as something he needs to do in order to “catch up” on the sleep deprivation of the previous week.

The circadian sleep drive, discussed in Chapter One, influences not only when we fall asleep, but when we wake up as well. Its effect is very strong, and you can see this in how differently you feel when you wake up earlier than usual and before it has had a chance to shut off. When you’ve stayed up late with friends on a Friday night and only gotten to sleep at two AM, waking up the next morning at seven to take your kids to soccer is manageable, even though you’d like to have gotten more sleep, and on balance are very grateful for the invention of coffee. Contrast that with how you feel when you go to sleep at ten PM and wake up five hours later at three AM to catch an early flight. It’s usually some combination of feeling cold, bloated, vaguely nauseous, and like your brain is swaddled in cotton until you get close to your usual wake up time. That’s because your inner clock is still set on “sleep” mode. It and all the other circadian rhythms of your body are busy keeping your body temperature low, slowing down your gastrointestinal tract, and trying to put your brain back to sleep.

Staying up late, sleeping in late
Like Jonathan, many kids and teens get into the habit of staying up late during the week for all the reasons discussed in Chapter Two (overscheduling and overstimulation). They muddle through the week getting progressively more sleep deprived. (Though because of
the way the circadian sleep drive fluctuates across the day, ramping up after lunch, down again in the evening before really turning on around our usual bedtime, they often seem to get a second wind in the evening just when we feel they should be getting ready for bed.) By the time the weekend arrives, their parents feels so badly for them that they will often let them sleep in “as long as they need to,” hoping that this will help them catch up on their lost hours of sleep.

The problem with letting your kid sleep in significantly later on the weekends is that it allows his inner clock to drift away from the external clock. Many people (especially, it turns out, teens, because of structural changes to their brains which accompany the transition from childhood to adulthood) have a natural tendency to shift their internal clocks to a later set point. If, like Jonathan, your child is allowed to sleep in several hours past his usual wake up time this is exactly what will happen. His inner clock will shift, completing the process that was already started by the chronic delaying of his bedtime on school nights. His circadian sleep drive will shut off at a later hour in the morning, which in turn will make it much more difficult for him to get up at his usual wake up time.

And so, by the time Monday morning rolls around and Jonathan has to revert to his weekday schedule with its 6 AM wake-up time so that he can shower, eat breakfast and catch the school bus, he is, in effect, suffering from the equivalent of a five hour jetlag. Small wonder, then, that it is so difficult for him to function in school, especially during the first few periods! It is as if he flew to London on Sunday and then tried to wake up for school on Monday at 6 AM Greenwich Mean Time (the equivalent of one AM Boston time). And because it takes the inner clock about a day to adjust for each hour of jetlag, Jonathan is really only back in synch and ready to fully function again in school by Friday, just in time for the weekend and for everything to spin out of control again.

This is why many older kids and teens so do poorly with early school start times. A group of Israeli researchers reported in the Journal of Clinical Sleep Medicine that middle school students who started class an hour later (and who slept, on average, fifty five minutes more than their peers) did better on tests measuring attention and impulsivity. Another study done by Dr. Judy Owens and colleagues in Rhode Island found that delaying high school start times by just thirty minutes resulted in improved alertness, mood, and health of students.

This “Monday morning jetlag” is properly known as delayed circadian phase syndrome and it is present in between five and ten percent of teens. Still, some kids seem much more prone to develop it than others. So why is it that some are able to sleep in on the weekends for an extra hour or two without difficulty while others seem to get into so much trouble doing so?

**Morning people versus night people**

Two words: genetic variability. Some people, often described as “owls,” have a natural inclination to stay up late (and to sleep in the next morning). Nothing pleases owls more than going out in the evenings and partying until the wee hours of the night, and nothing is harder for them than waking up early in the morning for school or work (or even play, for that matter). Many owls find fulfilling careers as musicians, late night radio announcers, and bartenders. Others, “larks,” are the exact opposite: bright eyed and bushy tailed at the crack of dawn, eager to take on the world without delay, the intensity of their energy in the...
morning is matched only by how quickly it fades in the evenings. Larks make good farmers, morning television hosts, and bakery workers. Both traits make sense from an evolutionary perspective: generations ago, when our ancestors slept under the stars, exposed to predators and the elements, it made sense for some of them to remain awake in the first part of the night and for others to wake up early in the morning to warn the group against approaching threats.

Delayed sleep phase is much more likely to develop in owls when they are given the chance to revert to their natural rhythms, which is why it is so important to be vigilant to avoid those things which can push them over the edge, such as overextended time commitments, poor sleep hygiene, and irregular sleep schedules.

While an acquired disconnect between the external and internal clocks might seem to be something which mostly affects older children and adolescents, it can be seen in younger children as well, even babies. By the age of 6 weeks, most infants have developed a circadian rhythm which results in most of their sleep taking place at night. However, when allowed to take frequent (and lengthy) naps during the day at the expense of their nighttime sleep, they too can acquire a phase shift of their inner clocks (in addition to not building up a significant sleep deficit). I have cared for babies who were routinely up for most of the night, taking short naps between periods of wakefulness, and finally settling down for a solid six hours of sleep at six AM. In my office, they invariably appeared fine. Their parents, however, looked like they had spent the last six months or so trapped inside a washing machine on spin cycle.

**Practical Suggestions for Anchoring Your Child's Inner Clock**

To help your child overcome a delayed sleep phase (and to prevent it from developing in the first place), you need to keep him on a regular schedule with a fixed wake up time on weekdays, weekends, holidays, and vacations. While you can make your child do a lot of things, there are some things you simply cannot force him to do. You can’t make him eat, drink, poop, pee, or fall asleep. You can, however, make sure that he wakes up at a specific time (though it’s not always easy!). By anchoring your child’s day to a specific wake up time, you do the same for his internal and external clocks. And remember: “waking up” means more than just getting your child to groan back at you reflexively without opening his eyes. It also requires more than just the physical act of getting out of bed, if all that means is that he’s now half-asleep on a couch watching You Tube in an otherwise dark room. Expose your child to lots of bright light in the morning. This will send a very powerful signal to his brain that it’s day and time to get going. It will not only wake him up, it will also help move his inner clock forward. In 2012, Australian researchers reported that a combination of cognitive behavioral therapy with bright light exposure in teens who suffered from delayed sleep phase syndrome successfully advanced their sleep and wake times and reduced complaints of daytime sleepiness.
Helping your child wake up in the morning

- Weekdays, weekends, vacation: it doesn’t matter. Keep your child on schedule, especially if he is an owl at heart!

- Alarm clocks are more effective when kept out of arm’s reach (i.e. the other side of the room). Nothing tempts a person to turn “just five more minutes” of sleep into two more hours than a snooze button.

- Keep the television OFF for (at least) the first two hours of the day.

- Expose your child to lots of bright light. Open all the shades and turn on the overhead lights. Discuss using a light box or light hat with your child’s pediatrician or a sleep specialist. Nothing gives a more powerful message to the brain that it’s day and time to get moving than light.

- Up means up: out of bed, dressed, and eating breakfast. Lolling around in bed for a couple hours just doesn’t cut it.

- Physical activity will help your kid get a jump on the day in more ways than one. Whether it’s walking the dog, riding his bike, or going out for coffee with a lark parent, this will anchor the day even more firmly.

Bright light comes in many shapes and forms. Natural sunlight is probably best, though it is in short supply during the dead of winter, especially in northern latitudes. Many kids need to wake up for school before the sun is up, and this can make it even more difficult to coax them out of bed. Strong artificial light can also be used very effectively (light in the blue spectrum seems to be the most potent in affecting the internal clock). There are light boxes which can be used for this purpose (they are also used to treat seasonal affective disorder), as well as special hats with battery powered light emitting diodes implanted in the visors. It is important to mention, though, that using light boxes and light hats should be done in consultation with your child’s pediatrician or with a sleep specialist. People with certain eye disorders should not use them. Likewise, if your child has an extremely long disconnect between his internal and external clocks, using light boxes and hats incorrectly may actually make his delayed sleep phase worse. That’s because bright light exposure in the evenings delays sleep onset whereas exposure in the morning advances it. If his internal clock is so delayed to the point that for him it’s still evening at six AM when you turn on all the lights, you may inadvertently delay his evening (or nighttime) sleep onset further, and make it even harder for him to synchronize his internal and external clocks. And this brings us to another, no less important point, which I’ve already discussed in Chapter Three: minimize your child’s exposure to bright light in the evening as much as possible. Bright light in the evening tells the brain that it’s still daytime, and that sleep needs to be put off. While many parents intuitively know this, and turn bedroom lights off, consider the fact that many computer screens now have blue backgrounds, and that this, too, may be adversely affecting your child’s internal clock. This is just one more reason to keep computers and other forms of electronic media out of the bedroom.
The role of melatonin

Melatonin, the hormone released by the brain around sleep onset, may also be used to help your child shift his internal clock earlier, but only after discussing this with a physician. In order to shift your child’s internal clock earlier, melatonin needs to be given four to five hours before bedtime (it is often given about half an hour before bed as a sleep aid, but its effect on the internal clock when given at bedtime is much smaller). However, just like the use of bright light exposure in the morning to try and advance the internal clock, if the disconnect between your child’s internal and external clocks is too great, this may actually have the opposite effect of that desired. Melatonin taken in the early morning tends to delay the internal clock. Therefore, discuss the use of melatonin and its timing with your child’s pediatrician or with a sleep specialist before you starting to give it.

If your child suffers from an extreme delayed sleep phase (several hours), you might consider taking advantage of the fact that it’s much easier to stay awake for a few more hours than usual than it is to try and will yourself to fall asleep when you aren’t sleepy. Because the earth completes one rotation every twenty four hours, staying up later and later will ultimately bring you back to where you started from. Moving the internal clock backwards instead of forwards until they synch is often easier than trying to move it in the other direction. If your child is going to sleep at dawn and rising after noon, talk with him about trying to stay awake an additional three hours every day for the next five to seven days. By doing this, he will also push back his wake up time by three hours every day, until he comes full cycle and has synchronized both his clocks synchronized again. This is known as chronotherapy.

<table>
<thead>
<tr>
<th>What the schedule of a teen starting out with a six hour phase delay might be like while doing chronotherapy</th>
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<tbody>
<tr>
<td>• Day one: fall asleep 4 am, wake up 12 pm noon</td>
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<tr>
<td>• Day two: fall asleep 7 am, wake up 3 pm</td>
</tr>
<tr>
<td>• Day three: fall asleep 10 am, wake up 6 pm</td>
</tr>
<tr>
<td>• Day four: fall asleep 1 pm, wake up 9 pm</td>
</tr>
<tr>
<td>• Day five: fall asleep 4 pm, wake up 12 am (midnight)</td>
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<tr>
<td>• Day six: fall asleep 7 pm, wake up 3 am</td>
</tr>
<tr>
<td>• Day seven: fall asleep 10 pm, wake up 6 am</td>
</tr>
<tr>
<td>• Days eight and onward: fall asleep 10 pm, wake up 6 am</td>
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</tbody>
</table>

There are other things you can do to help your child wake up and get out of bed in the mornings, primarily during the transition phase in which he is realigning his two clocks. Promoting physical activity in the mornings is a great way of doing this, especially when tied in to something fun, like going for a jog with dad or a bike ride with mom (the lark parent!). But try and make the activity enjoyable. While there’s nothing wrong with asking your child to get up at six AM to mow the lawn, it will probably take a lot more convincing than walking over to a nearby coffee shop for breakfast.

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If your child is awake for long stretches of the night because of a sleep onset association or limit setting disorder, don’t let him sleep in the next morning to make up for the lost hours of sleep. The reasons are exactly the same as for not allowing older children to catch up on their sleep on the weekends. If you do let him catch up on his sleep during the day, he is very likely to shift his internal clock later and this will make him less likely to fall (or stay) asleep at the designated time the following night. Yes, he’ll be sleepier the next day (and probably quite cranky, too), but this will help him to fall asleep with greater ease the following evening. Daytime sleep will also reduce the influence of his sleep deficit on sleep pressure, as I discussed in Chapter One. The drive to sleep in children is very strong, as anyone whose kid has fallen asleep on the high chair during dinner knows. Use this to your (and your child’s) advantage, and leverage both components of his sleep pressure to fall and stay asleep the following night. If you do let him play catch up the next day, the chances are very good you’ll both be reliving the previous night’s adventures come bedtime, as your well rested child will have much less sleep pressure bearing down upon him.

As I’ve tried to explain throughout this book, sleep disturbances are very common in children, and have different causes as they age and develop. In many instances, there is more than one reason why your child isn’t sleeping well. For example, your toddler may be spending too much time in bed and have a sleep onset association disorder, while your teen may have a problem with poor sleep hygiene that feeds into a delayed sleep phase. The good news is that most sleep disorders are pretty easy to fix once you’ve resolved to help your child overcome them. If, however, you find yourself running into trouble, or think that there may be something else going on, such as an underlying medical problem which might either be interfering with his sleep or causing chronic fatigue through a wholly different mechanism (such as Lyme disease, for example), you should feel very comfortable discussing it with your child’s pediatrician or a pediatric sleep specialist. Reading this book is a great first step, but if that’s not enough, it’s important you seek further assistance to help your child get the sleep that he or she needs. The consequences of poor sleep on a child’s behavior, attention, cognition, development, and physical health are just too significant to ignore.

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Chapter One:

Chapter Two:

Sleep Tight (Without the Fight) 6_29_2012 Dennis Rosen


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Chapter Three:


Sleep Tight (Without the Fight) 6_29_2012 Dennis Rosen


Chapter Four:


Chapter Five:


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