



Sleep Disorders:

# Parents' Medication Guide

AMERICAN ACADEMY OF  
CHILD & ADOLESCENT  
PSYCHIATRY

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# Table of Contents

Introduction.....	4
<i>Sleep Development</i> .....	4
<b>Table 1</b> Overview of Common Sleep Disorders Seen in Children and Adolescents.....	5
Insomnia.....	6
<i>Overview of Healthy Sleep Practices</i> .....	6
<i>When to Consider Medication</i> .....	6
<i>Medication Treatment of Insomnia: Over-the-Counter Medications</i> .....	6
Antihistamines.....	6
<b>Table 2</b> Basics of Using Medication Treatments for Insomnia in Children and Adolescents .....	7
Melatonin.....	8
<i>Medication Treatment of Insomnia: Prescription Medications</i> .....	8
Alpha Adrenergic Medications .....	8
Antidepressants.....	8
Antipsychotics .....	8
Melatonin Receptor Agonist .....	8
Nonbenzodiazepine and Benzodiazepine Agonists .....	8
<b>Table 3</b> Medications for Insomnia and Common Side Effects .....	10
Orexin Receptor Antagonists.....	10
Other Medications and Preparations.....	10
Summary.....	11
Additional Resources .....	12



# Introduction

This Medication Guide will explain why, when, and how sleep medication may be recommended by a healthcare professional for your child's insomnia and other sleep problems and will help you decide which treatment options might work best.



## Sleep Development

Sleep goes through many changes in the first few years of life as the brain develops. In all stages of development, there are two types of sleep states known as non-rapid eye movement (NREM) sleep and rapid eye movement (REM) sleep, also called the "dreaming stage." NREM and REM periods of sleep alternate, making up a sleep cycle. One night of sleep is usually made up of about 4 to 6 of these sleep cycles. The roughly 24-hour cycle of periods of sleep and wakefulness (the *circadian rhythm*) is controlled by parts of the brain known as the "circadian clock" or "sleep-wake clock." An important player in this sleep-wake clock is the hormone melatonin. As it gets darker in the evening, melatonin is produced in the brain and signals that it is time to go to sleep. In the morning, sunlight sends signals to the brain to stop producing melatonin and helps the transition from sleep to wakefulness.

The amount of sleep a person needs changes throughout their life. Infants may need 14–17 hours of sleep including naps. School-aged children typically need 9–10 hours of sleep per night, and adolescents are recommended to get 8–10 hours per night. These are not absolute numbers, as some children may require more or less hours of sleep. If you have concerns about the total amount of your child's sleep, please consult your clinical provider.

Sleep disorders such as difficulty falling or staying asleep (insomnia) are very common in children, especially in those with mental health and neurodevelopmental conditions. Sleep disorders are best addressed first by working on healthier sleep behaviors such as setting up a bedtime routine, keeping regular sleep and wake times, reducing noise

and light from screens like tablets, TVs, and computers at bedtime. Adolescents and older children who suffer from sleep problems can benefit from a non-medication approach called cognitive behavioral therapy (CBT). CBT involves working with a provider to learn ways to think about sleep and to practice behaviors that will help with falling and staying asleep.

Your child's medical provider may prescribe a sleep medication to go along with behavioral management for insomnia to improve your child's sleep. This Medication Guide will explain why, when, and how sleep medication may be recommended by a healthcare professional for your child's insomnia and other sleep problems and will help you decide which treatment options might work best. It provides an overview of the different over-the-counter and prescription medications available to treat sleep issues, including how they can help and possible side effects.

There are different types of healthcare professionals who can help you to address your child's sleep problems. Child and adolescent psychiatrists, pediatricians, and family doctors are physicians who are trained to care for children. They can provide basic treatment and refer your child to a specialist, if needed. Sleep physicians are medical doctors who are trained in sleep medicine. Pediatric sleep laboratories are specialized medical facilities that perform sleep studies under the supervision of a sleep medicine specialist. Behavioral sleep specialists focus on the evaluation and treatment of sleep disorders by addressing behavioral, mental, and physical factors that are involved with sleep. Some have special expertise in behavioral therapies for sleep disorders. Training specifically in CBT-I or a CBT Diplomate Certification is ideal.

**Table 1. Overview of Common Sleep Disorders Seen in Children and Adolescents**

Disorder	Key Symptoms	Treatment Options <sup>1</sup>
<b>Insomnia</b>	Persistent bedtime struggles; difficulty falling asleep and/or staying asleep that usually requires caregiver assistance	<ul style="list-style-type: none"> <li>• <b>Behavior changes (for example, adjusting your child’s sleep schedule, changing caregiver responses to child’s sleep behavior, and improving your child’s sleep habits or bed/bedroom environment)</b></li> <li>• <b>Mental strategies (modifications of caregiver or adolescent’s sleep beliefs or expectations)</b></li> <li>• Combination of behavior changes with melatonin or medication, if needed</li> </ul>
<b>Circadian Rhythm Sleep-Wake Disorder, Delayed Sleep Phase Type</b>	Frequent severe trouble falling asleep (for example, after 1–2am) and waking up that make it hard for child to do daily activities (such as school attendance); most common in teens	<ul style="list-style-type: none"> <li>• <b>Behavior changes that help improve your child’s ability to fall asleep and wake up at appropriate times</b></li> <li>• <b>Avoidance of bright light in the evening and increased exposure to bright light in the morning</b></li> <li>• <b>Melatonin, if needed</b></li> </ul>
<b>Narcolepsy</b>	Extreme daytime sleepiness (not due to lack of sleep) and/or very long nighttime sleep times; may also have sudden muscle weakness with strong emotions called cataplexy attacks	<ul style="list-style-type: none"> <li>• <b>Medications:</b> antidepressants, atomoxetine (Strattera), armodafinil (Nuvigil)*, modafinil (Provigil)*, pitolisant (Wakix)*, sodium oxybate (Xyrem, Xyvav)**, solriamfetol (Sunosi)*, psychostimulants</li> <li>• Scheduled naps</li> <li>• Behavior changes</li> <li>• More than one approach (often the most effective)</li> </ul>
<b>Restless Legs Syndrome</b>	A strong need to move the legs, often with leg discomfort; typically worse at bedtime	<ul style="list-style-type: none"> <li>• <b>Iron<sup>^</sup> therapy</b> (if iron is low)</li> <li>• Avoidance of food and drink (like caffeine) that can worsen symptoms</li> <li>• Behavior changes (for example, enough sleep, a regular sleep schedule)</li> <li>• Muscle relaxation (stretching, massaging) before bed</li> <li>• Medication (rarely needed): clonazepam<sup>^</sup>, clonidine<sup>^</sup>, gabapentin-enacarbil<sup>^^</sup>, gabapentin<sup>^</sup>, pramipexole<sup>^^</sup>, ropinirole<sup>^^</sup></li> </ul>
<b>Obstructive Sleep Apnea</b>	Constant loud snoring; breathing pauses—may briefly stop breathing while asleep; mouth breathing, restless sleep	<ul style="list-style-type: none"> <li>• <b>Surgery (removal of tonsils and/or adenoids), a first-choice treatment for children</b></li> <li>• Medications to help with allergies</li> <li>• Strategies for healthy weight</li> <li>• Continuous positive airway pressure (CPAP), a machine that helps people breathe throughout the night if surgery fails or surgery is not an option</li> <li>• Oral appliances, which are mouth devices custom fitted by a dentist, if suggested</li> <li>• Myofunctional therapy, consisting of exercises to improve the resting posture of the face and mouth</li> </ul>
<b>Sleepwalking/ Sleep Terrors</b>	Walking during sleep; appearing very upset or scared with no response to caregivers or showing confusion with caregivers; no memory of events	<ul style="list-style-type: none"> <li>• <b>Healthy changes in sleep habits</b></li> <li>• <b>Improvements in safety for your child in the home during the night</b></li> <li>• Medication (rarely needed)</li> </ul>

<sup>1</sup>Bolded treatment options are considered the first choice for most patients

\*FDA approved for use in adults for excessive sleepiness associated with narcolepsy

\*\*FDA approved for excessive sleepiness and cataplexy treatment in children and adolescents and adults

<sup>^</sup>FDA approved for use in children with conditions other than RLS

<sup>^^</sup>FDA approved for use in adults with RLS

# Insomnia

Insomnia is the most common sleep disorder in children and adolescents. It most often results from habits that can lead to poor sleep. The definition of insomnia also includes struggles at bedtime, waking up too early in the morning, and not being able to sleep without the help of a caregiver. If these behaviors affect a child during the daytime (with their mood, behavior, attention, schoolwork, etc.) and they happen at least three times per week for at least three months, then insomnia may be diagnosed. Children with medical issues such as chronic pain are more likely to develop insomnia, as are children with mental health issues such as anxiety and those with disorders such as autism spectrum disorder or genetic syndromes.

## Overview of Healthy Sleep Practices

Children and adolescents benefit from healthy sleep behaviors and habits. If your child has trouble falling asleep, behavioral changes can help. Behavioral treatment is the first-line treatment of choice for insomnia and should always be included. The following healthy sleep practices are recommended for all children and adolescents, especially those who are having sleep difficulties:

- A **healthy sleep environment** (a quiet, cool, dark room at night that brightens in the morning).
  - Family habits to help your child **fall asleep on their own in the same place** that they will sleep for the night.
  - A **consistent sleep and wake schedule** that does not change more than 60 minutes between the weekdays and weekends.
  - A quiet and soothing **bedtime routine** that is predictable and short.
- A light healthy snack (for example, cheese and crackers) and limiting drinks before bed.
  - Moderate to energetic **exercise** during the day but not within 2–3 hours of bedtime.
  - **Avoidance of caffeine** at any time (best for children), but especially within 6 hours of bedtime.
  - **Avoidance of electronic devices** (cell phones, tablets, laptops) for at least one hour **before bedtime** and keeping them out of the bedroom, if possible.
  - Naps generally **no longer needed for children over age 5** unless you are told they are needed by your provider.

There are more behavioral changes that your provider can recommend to try with your child or teen.

## When to Consider Medication

While most sleep issues are best addressed with behavioral interventions, there are some situations where a sleep medication may be appropriate in addition to changing behaviors and habits. Sleep medications may either be prescribed or recommended (in the case of over-the-counter medications) by providers. Your child's provider will explain why, when, and how sleep medication may be added to the behavioral plan for your child's sleep problems and will help you decide which treatment options might work best for your child and your family.

## Medication Treatment of Insomnia: Over-the-Counter Medications

### Antihistamines

Antihistamines (such as diphenhydramine/Benadryl) can be used for insomnia in children; however, antihistamines should not be used

Table 2.

Basics of Using Medication Treatments for Insomnia in Children and Adolescents	
<b>Continue behavioral interventions</b>	<ul style="list-style-type: none"> <li>• Through changes in behavior, parents and the child play a critical role in making long-term improvements.</li> <li>• This approach is important because the child needs to learn new behaviors while the medication helps address severe difficulties with falling and staying asleep.</li> </ul>
<b>Establish clear treatment goals with realistic expectations</b>	<ul style="list-style-type: none"> <li>• For example, it is normal for children to wake up briefly during the night several times. So, while the goal of having no night awakenings is unrealistic, teaching your child to return to sleep without you is a great goal.</li> <li>• Keeping track of your child’s response (good or bad) to any sleep medications is very important to finding the best treatment.</li> </ul>
<b>Medication use should be as short term as possible</b>	<ul style="list-style-type: none"> <li>• Whenever possible, time limits should be placed on medication use (weeks to several months).</li> <li>• However, some children (such as those with autism spectrum disorder, ADHD, major mood disorders like bipolar disorder) may need longer-term use; this requires regular monitoring of the best dose and any side effects.</li> </ul>
<b>Tell the provider about any medications or vitamins your child takes sometimes or often</b>	<ul style="list-style-type: none"> <li>• Make sure to inform the provider about any other medications your child is taking, so that the provider can ensure that any medications are used together safely.</li> <li>• This includes any sleep medications (including over-the-counter medications, supplements, and vitamins such as melatonin and antihistamines like Benadryl) that you are using for your child.</li> </ul>
<b>Do not change the amount of medication or discontinue the medication without first talking to the provider</b>	<ul style="list-style-type: none"> <li>• Never change the amount of your child’s sleep medication without checking with their provider. Some sleep medications can be dangerous if the dose is too high; never increase the medication on your own.</li> <li>• Sudden stopping of sleep medication can result in side effects. In general, these sleep medications should be decreased slowly.</li> </ul>



## Caution

Some medications used to treat sleep issues in children and adolescents can be deadly in overdose.

Safely keep these medications, and all medications, in a place where your child or teen cannot get to them.

Sleep medications should not be increased without talking to your child's medical provider.

to treat child insomnia for more than two weeks. Using them for longer can cause a child to not be able to sleep without them or to need higher and higher doses to be able to fall asleep. Because of these possible problems, antihistamines should be avoided whenever possible. Sometimes, antihistamines can cause constipation, dry mouth, and blurry vision. In some children, they have a rare risk of causing agitation and excitement instead of sedation.

## Melatonin

Melatonin is available without a prescription and is a laboratory-made form of a hormone that our brains naturally make in the evening to help us fall asleep. Melatonin has two major effects: 1) when taken in larger doses (for example, 3 to 5 mg) about 30 minutes before bedtime, it causes drowsiness and acts as a mild sleeping medication; and 2) when taken in much smaller doses (such as 0.5 mg) several hours before bedtime, it does not cause sleepiness directly but affects the sleep-wake clock in the brain, moving the time to fall asleep earlier.

While melatonin is often viewed by parents as “natural” and therefore safe, it is still considered a medication and should be used only under the care of a medical professional. There are some concerns about the possible effect on how a child develops during puberty with long-term use of melatonin. Melatonin should be used only for children who have a sleep problem (in other words, not just to make sleep “better” in children who already

sleep well). A number of over-the-counter medications contain melatonin (like “nighttime” cough syrups for children and “relaxation aids”), so it is important to read the medication labels and discuss with your child's provider.

**Types and dosing.** Many kinds of melatonin are available, including liquids, tablets, and gummies. Because the amount of melatonin in each type varies, please talk to your child's provider about the best recommendation(s) for your child. Melatonin is not recommended for children under the age of two years.

**Effectiveness.** Studies show that children who have disorders like autism spectrum disorder and ADHD have well documented sleep improvement with both short-term and long-term use of melatonin. The use of melatonin in children without disorders like autism spectrum disorder also appears to help but is less well studied.

## Medication Treatment of Insomnia: Prescription Medications

### Alpha Adrenergic Medications

Alpha adrenergic medications include clonidine and guanfacine. These medications can be used for insomnia in children with ADHD. Both are also available in extended-release forms: clonidine CR (Kapvay) and guanfacine ER (Intuniv). These medications may become less helpful over time, requiring higher doses for the same effect. If these medications are causing side effects, they must be slowly decreased and stopped by your child's provider.

### Antidepressants

Antidepressants are not recommended for the treatment of insomnia alone.

Several antidepressant medications, such as mirtazapine or doxepin, can cause sleepiness and after careful discussion with your child's provider, could be used to treat insomnia for those who also have depression or an anxiety disorder. Doxepin (Silenor) has been approved by the FDA for the treatment of sleep-maintenance (staying asleep) insomnia in adults.

**Trazodone** (Desyrel) is known to help with falling and staying asleep. However, there are no well-done studies on the use of trazodone for sleep in children.

### Antipsychotics

Antipsychotics are not recommended for the treatment of insomnia alone. These medications are prescribed for individuals with insomnia who have another mental health condition, such as bipolar disorder, severe depression, and others. Atypical antipsychotic medications such as quetiapine, olanzapine, and risperidone can make people very sleepy.

### Melatonin Receptor Agonist

Ramelteon is a medication that works like the hormone melatonin and is approved by the FDA for the treatment of insomnia in adults. It is only helpful for problems falling asleep.

### Nonbenzodiazepine and Benzodiazepine Agonists

The nonbenzodiazepine sedative hypnotics are frequently referred to as “Z-medications” (such as zolpidem/Ambien). There are very few studies on the use of this kind of medication in children, and they are not usually used in children and adolescents.

Benzodiazepines (like temazepam, triazolam) are rarely used in children and adolescents for treatment of sleep disorders, except for clonazepam, which

**NOTE:** None of the medications discussed here for **insomnia** treatment are approved for use in children by the U.S. Food and Drug Administration (FDA), though some are FDA approved for other pediatric uses. This does not mean that they are “unsafe” but that there are not enough studies for the FDA to approve them for treatment of insomnia. These medications may still be prescribed by your child's provider, based on research or their clinical experience of the medication's safety and effectiveness.





**Table 3. Medications for Insomnia and Common Side Effects**

Medication	Common Side Effects	Primary Reason for Use F = Primarily used to help fall asleep S = Primarily used to help stay asleep
<b>Over-the-Counter Medications</b>		
Antihistamines*	<ul style="list-style-type: none"> <li>• Morning grogginess, blurry vision, dry mouth, and constipation</li> <li>• Some children may experience an “opposite” effect with hyperactivity and excitability</li> <li>• Long-term use may cause a child to struggle emptying their bladder or with constipation</li> </ul>	F
Melatonin	<ul style="list-style-type: none"> <li>• Morning grogginess, bedwetting, nightmares, headache, dizziness, mood changes, and stomachaches</li> </ul>	F
<b>Prescription Medications</b>		
Alpha adrenergic medications* (clonidine and guanfacine)	<ul style="list-style-type: none"> <li>• Low blood pressure (clonidine), and problems such as blurry vision, dry mouth, and constipation. Other side effects include lightheadedness, confusion, and irritability. Clonidine may increase confused behaviors especially in children with a history of sleepwalking or sleep terrors. Rarely, an increase in blood pressure can be seen when stopping suddenly (clonidine).</li> </ul>	F/S
Antidepressants* (such as trazodone)	<ul style="list-style-type: none"> <li>• Dizziness, drowsiness, agitation, irregular heartbeat, reduced blood pressure, blurred vision, and nausea and vomiting</li> <li>• Priapism (painful long-lasting erection in males) is a serious but rare side effect</li> </ul>	F/S
Antipsychotics* (quetiapine, olanzapine, and risperidone)	<ul style="list-style-type: none"> <li>• Daytime grogginess, dizziness, and increased appetite; in rare cases may cause abnormal movements that are a serious side effect</li> </ul>	F/S
Melatonin receptor agonist** (ramelteon)	<ul style="list-style-type: none"> <li>• Dizziness, nausea, and daytime grogginess</li> </ul>	F
Nonbenzodiazepines** (“Z medications”)	<ul style="list-style-type: none"> <li>• Unusual behaviors during sleep, such as sleep-driving and sleep-eating, have occurred in adults taking these medications</li> </ul>	F/S
Orexin receptor antagonists ** (suvorexant, lemborexant)	<ul style="list-style-type: none"> <li>• Daytime grogginess, nightmares, sleep terror</li> </ul>	F/S

\* FDA approved to treat conditions other than sleep-related conditions in adults

\*\*FDA approved for the short-term treatment of insomnia in adults

If your child develops any side effects, it is recommended to discuss with your provider as soon as possible.

can be used to treat severe sleep terrors and sleepwalking. Benzodiazepines also help in reducing anxiety, relaxing muscles, and reducing seizures but have many side effects including dependence.

### Orexin Receptor Antagonists

Orexin receptor antagonists are a new generation of prescription sleep medications that limit the effects of orexin, a chemical

messenger in the brain that regulates sleep and alertness. There are two medications in this class of medications: suvorexant (Belsomra) and lemborexant (Dayvigo), which are approved by the FDA for the treatment of insomnia in adults.

### Other Medications and Preparations

Your child’s provider may choose to prescribe medication for sleep that is

not listed under the previous categories. Please talk to the provider about the pros and cons of that medication and the reasons that it is being selected.

Herbal and other supplements on the market may claim to treat sleep disorders; however, always check with your child’s provider when considering giving them to your child, as supplements may interact with prescribed medications.

# Summary

**S**leep disorders are common in children and adolescents. Evaluation and treatment of sleep disorders should be done by a clinical professional and may require referral to a specialized sleep center. Behavioral treatments for sleep is a first

choice to help pediatric insomnia. Choosing the right medication for insomnia should be made with your child's provider, keeping in mind if the child has any other medical and mental illnesses, and always be combined with improving behaviors and habits around sleep.





# Additional Resources

- [Healthy Sleep Habits](#)
- [Sleep Tips for Your Family's Mental Health](#)
- [Insomnia](#)
- [Restless Legs Syndrome](#)
- [Narcolepsy](#)
- [AACAP Child and Adolescent Psychiatrist Finder](#)
- [APA Psychologist Locator](#)
- Diplomates at the Academy of Cognitive and Behavioral Therapies ([www.academyofct.org](http://www.academyofct.org))





# Medication Tracking Form

Use this form to track your child's medication history. Bring this form to appointments with your provider and update changes in medications, doses, side effects and results.

Date	Medication	Dose	Side Effects	Reason for keeping/stopping

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