

# Insomnia Disorder in Children and Adolescents

## Level 0

### Comprehensive assessment

- ◆ Sleep disorders are prevalent in children with neurodevelopmental problems and other psychiatric conditions. Refer to Autism Spectrum Disorder (ASD) guidelines for comprehensive assessment and treatment of sleep problems in this population available at <https://floridabhcenter.org/>.
- ◆ Sleep practices (e.g., electronics use, caffeine, napping)
- ◆ Primary sleep disorders [Obstructive sleep apnea (OSA), Restless leg syndrome (RLS), circadian rhythm disorders]
- ◆ Medical, psychiatric and neurodevelopmental co-morbidities
- ◆ Concomitant medications, especially psychotherapeutic medication
  - ◇ Direct effects on sleep
  - ◇ Exacerbation primary sleep disorders
- ◆ Caregiver role
- ◆ Presentation: sleep onset/maintenance

The BEARS Sleep Screening Algorithm screens for major sleep disorders for ages 2 to 18 years. Refer to <https://floridabhcenter.org/> for the BEARS Sleep Screening Algorithm and for updated links to sleep diaries.

### **Additional considerations:**

- ◆ Consider chronic sleep loss and primary sleep disorders (OSA, RLS, and narcolepsy) as potential causes of psychiatric symptoms.
- ◆ Consider comorbid chronic sleep loss and primary sleep disorders as potential contributors to psychiatric symptoms.
- ◆ Applies to all psychiatric disorders but particularly ADHD and depression.

*Note: Polysomnography (sleep study) is best suited to diagnosing a primary sleep disorder such as OSA and should not be used to evaluate primary insomnia.*




## Level 1

### Education

- ◆ About the basics of sleep regulation, appropriate and healthy sleep practices

### Behavioral interventions

- ◆ Healthy sleep practices
  - ◇ Regular sleep schedule and bedtime routine, stimulus control (e.g., cool, quiet, dark sleep environment, avoiding bright light), avoidance of electronic devices (e.g., TV, computers, tablet devices, phones, etc.), limit caffeine, age appropriate napping, sleep restriction
- ◆ Caregiver-based for younger children
  - ◇ Sleep training, bedtime fading, bedtime pass
- ◆ Cognitive Behavioral Therapy for Insomnia (CBT-I) for older children and adolescents
  - ◇ Stimulus control, sleep restriction

	<p><b>Level 2</b></p> <p>Melatonin: 0.5 mg-10 mg nightly. No data for children under 2 years old. Melatonin is administered from 30 to 60 minutes prior to the desired bedtime. Refer to Table 11 below for dosing. <i>Consider recommending the use of pharmaceutical grade melatonin; refer to US Pharmacopeia available online.</i></p> <p><i>Note: Studies of melatonin use up to 4 years have failed to demonstrate significant side effects in a variety of pediatric populations; however, concerns based on animal studies about possible effects on pubertal development in humans with long-term use have been raised. In the absence of additional systematic long-term clinical trials, neither claims of safety concerns nor those of negligible risk of melatonin use in children can be substantiated.</i></p>
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**Table 11.**

<b>Medications for the Treatment of Insomnia in Children and Adolescents</b>			
Medication*	Starting Dose	Titration	Discontinuation
Melatonin	<p><i>Note on typical hypnotic dose of melatonin:</i></p> <p>Children &lt;2: No data available</p> <p>Children 2 years and older: 0.5 to 1 mg nightly</p> <p>Adolescents: 1 to 3 mg nightly</p>	<p>Up to a maximum dose of 3 mg nightly in children</p> <p>Up to maximum dose of 10 mg nightly in adolescents</p>	As clinically appropriate
Clonidine	0.05 mg nightly	0.05 mg per week up to 0.3 mg nightly	0.05 mg every 3 days
Diphenhydramine	<p>Children 2 years and older: 12.5 mg nightly</p> <p>Adolescents: 25-50 mg nightly</p>	<p>Up to 50 mg nightly in children</p> <p>Up to 100 mg nightly in adolescents</p>	As clinically appropriate

\* Melatonin is considered a dietary supplement and is not regulated by the FDA.

\*Clonidine is NOT FDA-Approved for treatment of insomnia in children and adolescents. Evidence exists supporting the use of clonidine in certain clinical populations with comorbid insomnia (neurodevelopmental disorders and ADHD).

Caution: Inadequate dose of sleep aids may result in night-time awakening. Too high a dose can result in over-sedation.

	<p><b>Level 3</b></p> <p>Pharmacotherapy should only be considered for <b>short-term use</b>.</p> <p>Pharmacotherapy with behavioral treatment may be appropriate for:</p> <ul style="list-style-type: none"><li>◆ Short-term crisis intervention.</li><li>◆ Insomnia with comorbid high risk psychiatric or neurodevelopmental conditions.</li><li>◆ Insomnia that exacerbates psychiatric and/or medical conditions.</li></ul> <p>Recommend clonidine 0.05-0.3 mg nightly.</p> <p>Diphenhydramine: 12.5-50 mg nightly. Can be considered for short-term situational or occasional use in younger children (available as liquid), especially those with comorbid atopic disease. Adverse reactions include paradoxical excitation and daytime somnolence.</p>
	<p><b>Level 4</b></p> <p>Appropriate psychotropic medications for patients with psychiatric comorbidities. Refer to relevant sections in these Practice Guidelines for dosing recommendations.</p>
<p><b>Not Recommended:</b></p> <p>Medication as the first or sole treatment strategy.</p> <p>Use of sedating psychotropic medication in the absence of other psychiatric disorder.</p> <p>The following have little or no scientific evidence, insufficient clinical pediatric use or experience and/or unacceptable risk/benefit ratios to warrant clinical recommendations:</p> <ul style="list-style-type: none"><li>◆ Amitriptyline</li><li>◆ Benzodiazepines</li><li>◆ Chloral Hydrate</li><li>◆ Doxepin</li><li>◆ Doxylamine</li><li>◆ Eszopiclone</li><li>◆ First/second generation antipsychotics (FGAs/SGAs)</li><li>◆ Ramelteon</li><li>◆ Suvorexant</li><li>◆ Zolpidem</li></ul> <p>For a full list of references, visit <a href="https://floridabhcenter.org/">https://floridabhcenter.org/</a></p>	