

How Does ASD Affect Sleep?

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A 2009 study published in *Sleep Medicine Reviews* noted parents report sleep problems for children with ASD at a rate of [50% to 80%](#)¹; by comparison, this rate fell between 9% and 50% for children that had not been diagnosed with ASD. The rate for children with ASD was also higher than the rate for children with non-ASD developmental disabilities.

In a recent study titled ‘Sleep Problems and Autism’, UK-based advocacy group Research Autism noted that the following [sleep issues](#)² are common among children and adults with ASD.

- Difficulty with sleep onset, or falling asleep
- Difficulty with sleep maintenance, or staying asleep throughout the night
- Early morning waking
- Short-duration sleeping
- Sleep fragmentation, characterized by erratic sleep patterns throughout the night
- Hyperarousal, or heightened anxiety around bedtime
- Excessive daytime sleepiness

The study also pinpointed several underlying causes for these sleep problems that are directly or indirectly related to the individual’s ASD diagnosis. These include:

Irregular Circadian Rhythm: The circadian rhythm is the 24-hour biological clock that regulates the sleep-wake cycle in humans based on sunlight, temperature, and other environmental factors. The circadian rhythm is processed in the brain, and • other environmental factors. The circadian rhythm is processed in the brain, and many people with ASD also exhibit irregularities with their sleep-wake cycle. Additionally, some studies have noted a link between children with ASD and [irregular production of melatonin](#)³, a natural hormone that helps regulate circadian rhythm.

Mental Health Disorders: Conditions like anxiety and depression are often co-morbid with ASD; these conditions often lead to insomnia and other sleep disorders. Studies have also suggested that [as many as half](#)⁴ of all children with ASD also exhibit symptoms of attention-deficit hyperactive disorder (ADHD), which can cause elevated moods around bedtime.

Medical Problems: Epilepsy is often co-morbid with ASD, and seizures can greatly impact sleep — even on a regular basis, in severe cases. Other common medical issues among people with ASD include constipation, diarrhea, and acid reflux.

Medication Side Effects: People with ASD who take medication may experience side effects that interfere with sleep. Selective serotonin reuptake inhibitors (SSRIs), for instance, may

1 <http://download.xuebalib.com/xuebalib.com.6250.pdf>

2 https://autism-connect.org.uk/upload/pdf_files/1431002236_sleep%20and%20autism.pdf

3 <https://www.webmd.com/brain/autism/helping-your-child-with-autism-get-a-good-nights-sleep#1>

4 <http://download.xuebalib.com/xuebalib.com.6250.pdf>

cause agitation and hyperactivity prior to bedtime. Antipsychotics like haloperidol and risperidone, on the other hand, may cause excessive drowsiness during the day that leads to sleep onset and sleep maintenance problems. Please scroll down to the ‘Treatment’ section for more information about ASD medications.

People with ASD often struggle with daily pressures and interactions more than individuals who do not live with the disorder. Lack of sleep can greatly exacerbate the feelings of distress and anxiety that they experience on a frequent basis. As a result, many people with ASD who have trouble sleeping may struggle greatly with employment, education, and social interaction — all of which can impact their outlook on life.

Persistent sleep problems in people with ASD may indicate a sleep disorder. [Insomnia⁵](#) is the most commonly reported sleep disorder among adults and children with ASD. Insomnia is defined as difficulty falling and/or remaining asleep on a nightly or semi-nightly basis for a period of more than one month. A study published in Sleep found that [66% of children with ASD reported insomnia symptoms⁶](#). A similar study from 2003 found that [75% to 90% of adults⁷](#) then-diagnosed with Asperger syndrome reported insomnia symptoms in questionnaires or sleep diaries.

In addition, [parasomnias⁸](#) such as [frequent nightmares, night terrors, and enuresis \(bedwetting\)⁹](#) have been widely reported among children with ASD, particularly those once diagnosed with Asperger syndrome. The child’s inability to express their fears and discomforts upon waking — often due to ASD — can complicate the way parasomnias are addressed and treated. Additionally, children with ASD often wake up in the middle of the night and engage in ‘time-inappropriate’ activities like playing with toys or reading aloud.

Sleep researchers are currently studying the relationships between other sleep disorders and ASD. For example, Dr. Steven Park recently noted a possible connection between ASD and obstructive sleep apnea (OSA), a condition characterized by temporary loss of breath during sleep resulting from blockage in the primary airway that restricts breathing. Dr. Park’s theory¹⁰ suggests that the intracranial hypertension found in many babies and infants with ASD may also cause the child’s jaw to take on an irregular shape, which can lead to sleep-disordered breathing as well. Other studies have explored the link between ASD and disorders like [narcolepsy¹¹](#) and [REM Behavior Disorder¹²](#). However, insomnia and parasomnias remain the most common sleep disorders among adults and children with ASD.

Next let’s look at treatment options and considerations for adults and children with ASD who are experiencing a sleep disorder. (See Next Article: Treatment Options for ASD-Related Sleep Problems).

5 <https://www.tuck.com/insomnia/>

6 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2786040/>

7 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC270035/>

8 <https://www.tuck.com/other-parasomnias/>

9 <http://download.xuebalib.com/xuebalib.com.6250.pdf>

10 <http://doctorstevenpark.com/the-sleep-apnea-autism-connection>

11 <http://journals.sagepub.com/doi/abs/10.1177/1362361398024008>

12 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3311408/>

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