

## RECOMENDATIONS FOR GOOD SLEEP HYGIENE

### SLEEP ENVIRONMENT

The bedroom should be dark, quiet and cool. As children with ASD might be particularly sensitive to noises and/or have sensory issues, the environment should be adapted to make sure things are as comfortable as possible.

### BEDTIME ROUTINE:

The routine should be predictable, relatively short (20 – 30 minutes) and include relaxing activities such as reading or listening to quiet music. Avoid the use of electronics close to bedtime such as TV, computer, video games, or other things that can be stimulating making it difficult for your child to fall asleep.

### SLEEP/WAKE SCHEDULE:

The schedule should be regular with not much of a difference between the weekday and weekend schedule.

### EXERCISE:

Daytime exercise can make it easier to fall asleep and people who exercise tend to have deeper sleep. Avoid exercise too close to bedtime as it can make falling asleep difficult.

### AVOID CAFFEINE

It can be alerting, making it difficult to fall asleep, especially if taken close to bedtime. Caffeine is found not only in coffee, but also in tea, chocolate and many sodas.

### NAPS

Although they may be helpful for pre-school children, they can interfere with sleep for everyone else, especially if taken later in the afternoon.

Researchers with the Autism Speaks ATN have developed and tested autism-specific strategies for improving sleep, like the ones modified and presented here. These can be found in three ATN/AIR-P guidebooks: visit: [www.autismspeaks.org/sleep](http://www.autismspeaks.org/sleep)

# ASK A DOCTOR

## WHAT'S GOING ON WITH SLEEP IN ASD?

Individuals on the autism spectrum often have difficulty falling and staying asleep. *Between 44 and 83 percent of children with autism have disordered sleep* (e.g., sleep apnea,<sup>1</sup> insomnia; nocturnal awakenings). By comparison, between 10 and 16 percent of children in the general population have difficulty sleeping?<sup>2</sup>

People with autism tend to have insomnia: It takes them an average of 11 minutes longer than neurotypical people to fall asleep, and many wake up frequently during the night.<sup>3</sup> Sleep in people with autism may also be less restorative than it is for people in the general population. They spend about 15 percent of their sleeping time in the rapid eye movement (REM) stage, which is critical for learning and retaining memories. Most neurotypical people, by contrast, spend about 23 percent of their nightly rest in REM.<sup>4</sup> There is mounting evidence that too little sleep can exacerbate autism features, such as poor social skills. Children who do not get enough sleep often have more severe repetitive behaviors and a tougher time making friends than other people on the spectrum. Children who do not get enough sleep tend to score lower on tests of intelligence. However, it is unclear whether these problems stem from poor sleep, contribute to it or both.

### • MEDICAL WORKUP

First, clinicians can assess sleep problems by interviewing families and asking them to maintain sleep diaries. They will also consider the person's height and weight,

as people who are overweight are at increased risk to have sleep apnea, an abnormal breathing pattern at night, often associated with snoring, which can interfere with sleep. They can also order some tests, such as iron levels, which can be abnormal in people with other conditions that interfere with sleep, such as restless legs syndrome.

In addition, some rare genetic conditions that can be found in people with autism, such as Smith Magenis syndrome, are associated with an abnormal sleep pattern. These can be detected with genetic testing, such as chromosomal microarray testing. Finally, they may order overnight in-lab testing in which a device worn on the wrist records a person's movements throughout the night (actigraphy).

### • TREATMENT

In some ways, the fix can be straightforward: Establishing a routine, such as an order of activities at bedtime, can often help a person fall asleep; so can changing the temperature or lighting in a bedroom. Sticking with regular bed and wake times can put the brain and body on a schedule that makes sleep more reliable.

In more complex cases, medications and breathing devices can be prescribed by your doctor. Sleep is a crucial part of a healthy life, make sure to talk to your doctor if you have questions or concerns about this! Thanks to Dr. Stephen Sheinkopf, Dr. Todd Levine, Dr. Daniel Moreno De Luca, and Lauren DeMoss for their insights on this important topic for the community.



Our colleagues at Spectrum ([www.spectrumnews.org/news/sleep-problems-autism-explained/](http://www.spectrumnews.org/news/sleep-problems-autism-explained/)) recently discussed the importance of sleep in ASD. We wanted to expand on their helpful information, which we adapted for this newsletter, and share additional steps in regards to the medical workup and treatment for sleep problems.

1. Goldman S.E. et al. (2009). Defining the sleep phenotype in children with autism. *Dev. Neuropsychol.* 34, 560-573. DOI 10.1080/87565440903133509

2. Singh, G. K., & Kenney, M. K. (2013). Rising prevalence and neighborhood, social, and behavioral determinants of sleep problems in US children and adolescents, 2003-2012. *Sleep Disorders volume 2013*. <https://doi.org/10.1155/2013/394320>.

3. Elrod, M. G., & Hood, B. S. (2015). Sleep differences among children with autism spectrum disorders and typically developing peers: A Meta-analysis. *J Dev Behav Pediatr* 36(3) 166-177.

4. Buckley, A. W., Rodriguez, A. J., & Jennison, K. (2010). Rapid eye movement sleep percentage in children with autism compared with children with developmental delay and typical development. *Arch Pediatr Adolesc Med* 164(11) 1032-1037. doi:10.1001/archpediatrics.2010.202