



Practice Guideline:

Sleep Problems in Children with Autism Spectrum Disorder

Summary for Families and Caregivers

Experts from the American Academy of Neurology carefully reviewed the available scientific studies about sleep problems in children with autism spectrum disorder. The following summary highlights what their findings mean for you.

What is the key message for me?

Some children with a diagnosis of **autism spectrum disorder** also have sleep problems. If this is the case for your child, an experienced clinician should do a careful evaluation. This may help find what is causing the sleep problems. The evaluation should include:

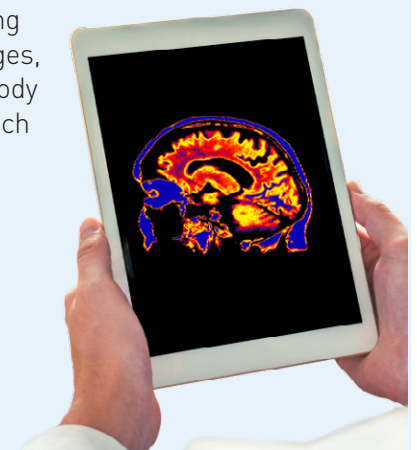
- A complete history of your child's health problems, including any medicines or supplements your child may be taking.
- A full history of any problems related to your child's development, emotions, behaviors, and relationships with others.
- A detailed description of your child's sleep habits and any sleep problems.
- A review of your family history of any sleep disorders.
- Screening of your child for other possible sleep problems. This should include any history of snoring or breathing with mouth open during sleep, restless sleeping, bedwetting, sleepiness during the day, sleepwalking, or having night terrors.

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What is Autism Spectrum Disorder?

Autism spectrum disorder is a group of disorders of the brain and nervous system that typically develop early in childhood. The main symptoms of this disorder include:

- Delays in developing language, memory, or thinking abilities
- Limited social skills
- Rigid behavior patterns, such as resisting schedule changes, and repeated body movements, such as rocking



Key to Evidence Levels

After the experts review all of the published research studies, they describe the strength of the evidence as follows:

Strong evidence = Future studies very unlikely to change the conclusion

Moderate evidence = Future studies unlikely to change the conclusion

Low evidence = Future studies likely to change the conclusion

Very low evidence = Future studies very likely to change the conclusion

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- A physical exam to rule out medical problems that could affect breathing. Examples are having large tonsils or swelling inside the nose from allergies or other health problems.

This evaluation may find that behaviors linked to autism spectrum disorder are causing your child's sleep problem. Or the evaluation may find that your child's sleep problems have another treatable cause.

The clinician will help you find out which of these treatment approaches may work best for your child:

- Behavior treatments for sleep problems
- Melatonin in the appropriate form and dose
- A combination of behavior treatments and melatonin therapy
- Treatment for the medical cause of the sleep problems

Why does my child have a sleep problem?

There are many reasons a child may develop sleep problems. These reasons include health conditions, side effects of medicines, emotional disorders, and family and social problems.

Almost half of children in the general population will have sleep problems at some time during childhood. For children with autism spectrum disorder, sleep problems are even more likely to occur.

Many children have sleep problems that are directly related to autism spectrum disorder. For other children, autism spectrum disorder does not seem to cause their sleep problems. However, the main symptoms of this disorder may add to or worsen sleep problems.

What sleep problems or symptoms are common for children with autism spectrum disorder?

Children with autism spectrum disorder can develop several kinds of sleep problems. Sometimes, the cause of the sleep problems is related to behavior instead of a medical problem. This guideline looked at four main types of sleep problems:

- Refusing to go to bed, stalling, or needing a parent or caregiver present until the child falls asleep
- Trouble falling asleep and staying asleep
- Sleeping for only short periods of time or not getting enough total sleep each night
- Behavior problems during the day from having poor sleep at night

The symptoms of autism spectrum disorder may add to or worsen any sleep problems.

What does the research say?

This guideline looked at several therapies for treating symptoms of sleep problems in autism spectrum disorder. Most of the studies lasted three months. The key findings are described below.

For sleep problems caused by behaviors, two types of treatment had evidence supporting their use:

- Behavior treatments for treating sleep symptoms
- Melatonin



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Behavior treatments include:


- Setting a regular routine with a bedtime and wake-up time. This helps your child develop a good bedtime habit and get the right amount of time in bed to meet sleep needs.
- Having a regular calming routine at bedtime with no use of electronics before bed.
- Choosing a bedtime that is close to the time when your child is getting sleepy. This may help your child fall asleep faster.



Melatonin is a natural chemical the body makes that tells the brain when to fall asleep and how long to sleep. It is available as a supplement over the counter or by prescription.


To different degrees, behavior treatments and melatonin helped treat most of the types of sleep problems studied here. However, they did **not** help treat daytime behavior problems or symptoms of autism spectrum disorder.

Behavior Treatments Alone

 The guideline found that use of behavior treatments may help treat sleep problems. However, the quality of the evidence supporting this is **low**.

Melatonin Alone or Used with Behavior Treatments

The guideline also found that the correct amount and form of melatonin can be helpful. The melatonin worked whether used alone or used with behavior treatments. However, the melatonin should be the form a clinician prescribes.

 The quality of the evidence is **moderate** for the following treatments:

- Melatonin used alone, if a clinician prescribes it
- Melatonin prescribed by a clinician and used with behavior treatments

The evidence for behavior treatments alone is less strong than the evidence for melatonin alone. However, experts think it is better for your child to start with behavior treatments for these sleep problems. This is because, unlike medicines, behavior treatments have no side effects.

If your child takes melatonin, be sure it is the right dose and form that your child's clinician recommends.

Studies suggest that melatonin can be used safely and effectively for many children with autism spectrum disorder. This is especially the case in the first three months of use. However, more information is needed about safety of melatonin use for a longer time period.

Before giving your child melatonin, always check with your child's clinician. Also, talk with your child's clinician if you give or plan to give your child melatonin regularly. The clinician should review the recommendations for use with you.

What can I do to help my child get better sleep?

It is important to help establish good sleep habits for your child as early as possible. These habits include having a regular bedtime and a regular routine before bed. Also, be sure your child avoids use of electronic screens before bed. If these behavior changes are difficult, ask for help from your child's clinician.

This guideline was endorsed by the American Academy of Sleep Medicine, Autism Speaks, the Child Neurology Society, and the Society for Developmental and Behavioral Pediatrics. The American Epilepsy Society affirmed the value of this guideline to epileptologists.

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» American Academy of Neurology, 201 Chicago Avenue, Minneapolis, MN 55415

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