

Strategies to Improve Sleep in Children with Autism Spectrum Disorders



A Parent's Guide



These materials are the product of on-going activities of the Autism Speaks Autism Treatment Network, a funded program of Autism Speaks. It is supported by cooperative agreement UA3 MC 11054 through the U.S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Research Program to the Massachusetts General Hospital.

This informational booklet is designed to provide parents with strategies to improve sleep in their child affected by autism spectrum disorders (ASD). Many children with ASD have difficulty with sleep. This can be stressful for children and their families. The suggestions in this booklet are based on both research and clinical experience of sleep experts. These strategies are for children of all ages, including teens, but some of the suggestions (such as avoiding naps) are geared toward older children who no longer need naps.

The suggestions may help your child get a better night's sleep and improve his or her sleep/wake schedule. The booklet includes information such as how to...



To help your child sleep better, it is important to address your child's sleep habits. This can mean changes to your child's sleep setting as well as how you talk with your child at bedtime and during night waking.

Sleep problems such as trouble falling asleep, staying asleep, or early morning waking, are common in typically developing children and in children with ASD. ***Some symptoms such as snoring, gasping for breath while sleeping, and/or bedwetting at night, may need further evaluation and treatment from a sleep specialist.***

Many parents may be able to help their children develop better sleep patterns by trying any of the number of suggestions described in this booklet. When selecting a sleep program, there are a few ideas to keep in mind in order to achieve success:

- Select ideas that work well with your family's lifestyle.
- Begin to implement the plan when you have the time and energy to see if they will work.
- Try one small change, and then slowly incorporate other changes.
- Be patient. It can take upwards of 2 weeks of persistence to see a change.

How much sleep does my child need?

Typically developing, school-age children often require 10-11 hours of sleep. However, many children with ASD appear to need less. It is important to keep this in mind as putting a child to bed too early to "get more sleep" may actually make falling asleep harder. For more pointers about creating a sleep schedule, see page 5.

PROVIDING A COMFORTABLE SLEEP SETTING

It is important to create a safe, quiet sleep setting for your child. Wherever your child sleeps, there should be a space at night to sleep that is his/her own. This may be part of a shared bed or the child's own bed, but it should be the same each night.

- The **bedroom should be comfortable** (not too hot and not too cold), quiet, and dark. If the room is too dark, add a dim night light to your child's bedroom and leave it on all night. If there is light coming into the room from streetlights or sunlight in the morning, consider adding heavier curtains to cover the windows.
- The **room should be quiet at night**. It is best to avoid things like the radio, television or music when he/she is falling asleep at night. When noises like these stop during the night, it may wake your child. Some children may find 'white noise' or a low, quiet, and consistent background sound such as a ceiling fan or air filter soothing. Generally, there should not be noise from other siblings, or from television, computers, video games or music in nearby rooms.
- **Consider the environment**. Children with ASD may be more aware of noises at night that do not bother other children. Things such as water running or other household noises can affect sleep. Children with ASD may have sensitivity problems to things like textures of bedding and pajamas. Try to find out if these things are affecting your child. For example, does he prefer tight or loose pajamas, or light or heavy covers?



It is important that you, your partner, and other caregivers follow the same, set routine.

The more regular the routine from one night to the next, the easier it will be for your child to settle to sleep at night.

ESTABLISH REGULAR BEDTIME HABITS

Establish bedtime habits that are short, predictable, and expected. A good routine will help teach your child how to relax and get ready for sleep. The routine should include soothing activities for your child. The stability of the routine will be calming to your child each night. Avoid activities before bedtime such as exciting television programs, movies/videos/electronic games, computers, loud music, or bright lights. It is best to avoid activities like running, jumping, or rough housing.

Start the routine 15 to 30 minutes before the set bedtime. A younger child will have a shorter routine (e.g. 15 minutes at one year of age) and this will increase as the child grows. However, the routine should not be more than 60 minutes.

SIMPLE TIPS TO A BETTER BEDTIME ROUTINE:

- ✓ It should take **place in the child's bedroom where it is quiet** (other than bathing/teeth brushing activities).
- ✓ Your child will be calmed when the **routine is done in the same order each night**.
- ✓ Young children or children with ASD may benefit from a **visual schedule or "to-do list"** (e.g. pictures, words, or both) to help remind them of each step (see below image for an example visual schedule). This will help your child see that his/her bedtime routine will be the same events in the same order each night. A visual schedule will also assist other family members and caregivers to follow the order of the routine. Children who do not respond well to the use of pictures may benefit from using objects. Each step in their bedtime routine may be captured by an object that is used in that step.
- ✓ Determine **which events are calming and which events are stimulating** for your child. Those events that are calming for your child should be part of the bedtime routine habit. Stimulating events should be moved to an earlier time in the evening. For example, if your child finds bathing stimulating rather than relaxing, move this event to an earlier time in the evening.

Example Bedtime Routine & Visual Schedule



Make the routine **calming, short, predictable, & expected**.

KEEP A REGULAR SCHEDULE

Choose a Bedtime...and Keep It. As much as possible (given the changes that go along with daily life), your child should have a bedtime and wake time that is the same 7 days per week. Pick a bedtime that works for your child's age. The bedtime should be one that works well with your own evening schedule to help with a constant routine each night. If your child's schedule needs to change because of new activities or family events, keep track of how this impacts your child's sleep. You may need to develop a new schedule or go back to the schedule that worked as soon as you can.



Time It Right. Many children (and adults) tend to get a "second wind" in the hour before bedtime, and may have trouble falling asleep if they go to bed too early. If your child takes more than an hour to fall asleep, think about putting off bedtime by 30 minutes to 1 hour to try to help with sleep.

As They Get Older. Bedtime will become later as your child grows, but it should always be set to allow enough sleep each day. Older children will also begin to stay up later and sleep later on weekends. Try to keep their schedule no more than one hour later for bedtime and one hour later for waking on weekends.



Early to Rise. Even if your child goes to sleep late at times, keep the wake time the same or not more than one hour later than the normal wake time. Although it may seem better to let your child 'sleep in' and catch up on sleep, the more regular the wake time, the better sleep will be.

Nap Time. If your child is younger and has a daytime nap, keep the nap times on a regular schedule. When possible, the nap should be in the child's bedroom. Wake your child by 4 pm from afternoon naps or it will be hard for them to fall asleep at bedtime. If your child is older and has outgrown the need for a daytime nap, avoid napping unless they are sick. For older children, sleeping during the day will make it harder to sleep at night.



Food Counts. Additional key points for setting a routine for your child are the time meals are served. Your child should eat breakfast each morning at around the same time, both on weekdays and weekend days. At the end of the day, you should not give your child heavy meals or large snacks late at night. However, a light snack with carbohydrates (e.g. cheese and crackers or fruit) may help your child fall asleep more easily.

Good Morning Sunshine, Good Night Moon. Exposure to sunlight in the morning and darkness at night also help keep a regular schedule. When your child wakes up in the morning, open the curtains and let natural sunlight come into the home. If your child goes to sleep while it is daylight, make sure the areas for your child's bedtime routine have dim light and that the bedroom is dark.

TEACH YOUR CHILD TO FALL ASLEEP ALONE

Why Should Children Learn to Fall Asleep Alone?

Children and adults naturally wake up several times each night. Each time we wake up, we check out our sleep environment and then quickly go back to sleep. These wakings are so brief that we often do not remember them in the morning.

If your child cannot fall asleep alone, then each time he/she wakes up, it is hard to fall back asleep without your help. If your child learns to fall asleep alone, then he/she will also be able to learn to fall back asleep at times of natural night waking, and wake more rested in the morning.



How Do I Teach Them?

Just as children have learned over time to fall asleep with your guidance, you will have to teach them to fall asleep alone. This should be done gradually and over a few weeks' time. For example, if you usually lie down with your child at bedtime, you can change your pattern by sitting on the bed for a few nights and then sitting in a chair beside the bed. Continue sitting in the chair, but move it farther from the bed each night until you are out of the room and out of visual contact with your child. While you are making these changes, reduce the amount of attention you pay to your child such as talking, facial expressions, or eye contact.

Once you are out of your child's bedroom, if he/she is upset and not sleeping, you can wait a few minutes, and then go back into the room to check. When you go into the room, make it a brief visit (less than a minute) and only give limited physical or verbal contact (e.g. a quick hug). Gently but firmly say, "It is time for bed. You are 'OK.'" Good night," and then leave the room.

If you need to go back into the room, wait longer each time and make each visit with your child brief. Once your child is able to fall asleep alone, then you can use the same techniques if he/she wakes in the night, or before wake time in the morning.

A Tool for Teaching: Bedtime Pass

A bedtime pass (see right) is a useful tool for older children. This is a card (or other object) that your child can present to you if he/she wakes at night. Your child may use it to trade for something brief, such as a quick hug or a drink of water.

Your child should be taught that they may only use the pass **one time** during the night, and that once the pass is used, it will be given to you. You will return the pass to the child the following night to use again.

Teach your child that if the pass is not used all night, it can be traded for a morning present. You can also set up a reward system. For example, for every night the child does not use the pass, he/she gets a sticker. If your child collects a certain number of stickers (e.g. five) they receive a special gift. The presents can be dollar store items or a special outing with you.



Bedtime Pass

Exchange once for:

- 1 visit from parent
- 1 drink of water
- 1 nighttime hug
- 1 nighttime kiss

ENCOURAGE BEHAVIORS THAT PROMOTE SLEEP

Physical Activity

Exercise during the day helps your child sleep better at night. Children and adults who exercise find it **easier to fall asleep at night and have deeper sleep**. If your child does not get regular exercise at school, try to schedule this at home.

Make sure the time for exercise is early in the day, as stimulating exercise close to bedtime may make it harder to fall asleep. Be sure all hard or tiring activity ends two to three hours prior to bedtime.

Caffeinated Foods & Beverages

Caffeine is a stimulant that can cause an 'alerting effect' and keep your child awake at night. The **effect of caffeine stays in the body for 3 to 5 hours and up to 12 hours**. If your child has caffeinated foods or beverages (e.g., chocolate, coffee, tea, and soda) in the afternoon or evening they may have difficulty sleeping. Some children sleep best when these products are taken completely out of their diet. Most children are able to sleep as long as they avoid caffeinated foods or beverages several hours before bedtime.

What about my other children?

Many families wonder how changes in one child's sleep habits will affect their other children. Often, the impact of a consistent routine is good for everyone.

Helping Hands: It may help to think about ways that brothers and sisters can help each other fall asleep. Allowing all children to use a visual schedule may help the child who has sleep problems learn to use a visual schedule. When everyone in the family is doing the same thing, it may be easier for your child to learn a new skill.

Play Together, Stay Together: It also helps to think about the activity level before bed. Brothers and sisters can help each other engage in calming activities.

Scattered Bedtimes: Some families find it helps to have their children go to bed at slightly different times. This lets parents give some "one-on-one" time to each child before bedtime. If your children do go to bed at different times, think about the noise level for the child who is winding down.

Sleep Setting: It may also help to think about the best sleep setting for your child. Some children do best in their own room, while others do well when they sleep in the same room with a brother or sister.

What if I have made changes but my child's sleep has not improved?

If these suggestions do not work for you and your child, or his/her sleep remains disturbed, you should talk to your child's doctor to find out if a meeting with a sleep specialist is needed. It may be helpful to explore any medical reasons that your child is not sleeping well and to determine if there are any medications that may help your child sleep better. Melatonin supplements have shown promise in small studies as have other medications to help sleep. These medications should be given under the care of a medical specialist.

RESOURCES

The Autism Speaks Family Services Department offers resources, tool kits, and support to help manage the day-to-day challenges of living with autism www.autismspeaks.org/family-services. If you are interested in speaking with a member of the Autism Speaks Family Services Team contact the Autism Response Team (ART) at 888-AUTISM2 (288-4762), or by email at familyservices@autismspeaks.org

ACKNOWLEDGEMENTS

This document was developed by Shelly K. Weiss, MD, FRCPC, Child Neurologist at the Hospital for Sick Children (SickKids), University of Toronto, Toronto, Ontario, Canada, and Beth Ann Malow, MD, MS, Neurologist and Director of the Sleep Disorders Program of Vanderbilt University, Nashville, Tennessee, as a product of the Autism Treatment Network (ATN), a program of Autism Speaks. The valuable assistance of the members of the ATN Sleep Committee in reviewing this document, including Terry Katz, PhD, Psychologist, University of Colorado School of Medicine, and Kim Frank, M.Ed, Educational Consultant, Vanderbilt University, is gratefully acknowledged. The bedtime pass concept was developed by Dr. Patrick Friman (Archives of Pediatrics and Adolescent Medicine, 1999)

This document was edited, designed, and produced by Autism Speaks Autism Treatment Network / Autism Intervention Research Network on Physical Health communications department. We are grateful for review and suggestions by many, including by families associated with the Autism Speaks Autism Treatment Network. This publication may be distributed as is or, at no cost, may be individualized as an electronic file for your production and dissemination, so that it includes your organization and its most frequent referrals. For revision information, please contact atn@autismspeaks.org.

These materials are the product of on-going activities of the Autism Speaks Autism Treatment Network, a funded program of Autism Speaks. It is supported by cooperative agreement UA3 MC 11054 through the U.S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Research Program to the Massachusetts General Hospital. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the MCHB, HRSA, HHS.