

# RECENT RESEARCH ON SLEEP AND AUTISM

## Addresses Treatment and Family Impact

By Jennifer Accardo, M.D.

Sleep is a basic human need. But just like eating, sleeping can be affected by skills we learn and how our brains are “wired”. Sleep can be a real challenge for children with autism and their families. This challenge is attracting the attention of researchers and clinicians. Research presentations in the area of sleep and autism have sparked lively discussions at international conferences including the International Meeting for Autism Research (IMFAR) in Philadelphia and the meeting of the Associated Professional Sleep Societies (APSS) in San Antonio last year. Recent research has focused on the scope of sleep problems, possible treatments, and the impact of sleep disorders on families.

Margaret Souders and colleagues at the University of Pennsylvania compared the sleep quality of 59 children with autism spectrum disorders (ASD) to that of 40 typically developing children. The researchers used the Children’s Sleep Habits Questionnaire (CSHQ) — also used as part of the ATN’s standard assessment — sleep diaries, and a tool called actigraphy, which is used to measure cycles of sleep and wakefulness. Data showed that 66% of the children with ASD had sleep problems, compared with 45% of the typically developing children. Although the study demonstrated that sleep problems are common among all children, significantly more children with ASD had sleep problems than did the typically developing children, whose sleep disturbances tended to be milder than those of the children with ASD.

How can we treat sleep problems in children with autism? Juthamas Wirojanan and other researchers at the UC Davis Medical Investigation of Neurological Disorders (M.I.N.D.)

Institute examined a popular treatment you may have heard about called melatonin. This hormone, which is sold over the counter, helps regulate the wake-sleep cycle. The researchers studied children who had autism, Fragile X syndrome (a genetic disorder which can involve autism) or both. The 12 children in this study were first given capsules containing either melatonin or a placebo (a sugar pill) for two weeks, and then given the other capsule for two weeks. When children took the melatonin, they fell asleep more quickly by an average of 28 minutes, and slept longer by 21 minutes. This study showed some useful results in a small number of children with different diagnoses, and points to the need for further studies on melatonin and other medical treatments for sleep.

Supplements and medications are not the only treatments for sleep problems. Researchers at Vanderbilt University investigated a different approach: parent education workshops. Their pilot project trained 20 families to manage their child’s sleep through a series of group sleep workshops. The three two-hour sessions covered bedtime routines, night wakings, and individualized sleep concerns. One month after completing the workshops, parents whose children had difficulty falling asleep reported that this problem had improved. Improvements were also reported in children’s daytime behavior. Parents whose children had night wakings did not report changes in this behavior. The study did not compare participants to families who did not attend workshops, and the number of families studied was small. Even so, this study is a great step forward in looking at how to help parents structure the sleep routine of their child with autism.

Some recent research considered the affect on families of children’s sleep problems. Muriel Lopez-Wagner and her colleagues compared 168 parents of children with autism with 106 parents of typically developing children. Not surprisingly, on a measure of sleep quality sleep problems were reported with greater frequency among the parents of children with autism than among the other parents. Parents also filled out the CSHQ for their children. Across both groups sleep problems in children were associated with sleep complaints in parents. What is not clear from this study is whether increased parenting stresses increase sleep problems in parents, or whether parents with sleep difficulty may have children who inherit a tendency towards sleep difficulties, and the researchers suggested further studies on the sleep problems of children and their parents.

Given the frequency of sleep disturbances among children with autism, sleep is a clearly worthwhile area for further research. We will continue to report on developments in this interesting area as more research is announced.



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