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Previously: Sleep and Autism

- Sleep basics: Sleep cycle and autism sleep research
- Impact of sleep disorders
- · Causes of insomnia medical and behavioral
- Problems falling asleep, staying asleep or both
- Prevention of sleep problems: Sleep hygiene
- Behavioral approaches for sleep
- Family systems issues and sleep
- Medications for sleep

· When to refer?



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Sleep and Autism: Introduction

- Welcome to the Sleep and Autism Masterclass
- Children with ASD have more and more complicated challenges when it comes to sleep
 - 50-80% vs 20-30%
- New research information
 - Melatonin
 - Genetics
 - Attachment and Sleep
 - Impact on family members
- Your questions about sleep and autism





Melatonin

- Give melatonin to their child two to three hours before the desired bedtime, so peak of melatonin to coincide with their natural sleep cycle
- Use for 6 months or less
- · Powering down screens at least one hour before bedtime
- Research shows that even small amounts of bright light exposure at night can <u>suppress</u> melatonin in children, making it harder to fall asleep.
- · Overall safe but not a lot of research on long term effects



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Sleep and Sibs

- In 2012, Chou et al. ASD-Sib have a higher risk of early insomnia and parasomnias compared to NT children
- Shivers et al. (2019) meta-analysis found increase:
 - internalizing behavior problems,
 - psychological functioning,
 - beliefs,
 - social functioning,
 - sibling relationship

From Xavier SD, Sleep Science 2021

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Sleep and Sibs

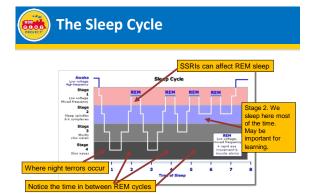
- Naeen et al. (2021) investigated 64 children with ASD, 80 of their siblings and 80 NT children using a sleep-wake diary, a school sleep habit questionnaire and a childhood autism spectrum test.
 - No significant differences in siblings or control subjects in terms of their sleep profiles.
- Taylor et al (2021) presented a genetic role for sleep issues in ASD siblings in15,279 child and adolescent ASD twin pairs.
 - Identical co-twins of ASD individuals were most at risk of difficulties initiating and maintaining sleep compared to the reference group, followed by dizygotic co-twins and full siblings.
 - Suggests genetic mechanisms for sleep difficulties

From Xavier SD, Sleep Science 2021





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Ferber Method and Attachment

- Studied 44 mother-infant pairs and ranked attachment as secure (27) or insecure (17) then studied sleep over 3 days
- Upper middle class and largely white
- 50% put babies to bed away/50% asleep
- * 25% brought babies to their bed at least 1 night of 3 $\,$
- The big difference:
 - Number of infants who signaled and are picked up or soothed in crib
- No statistical difference in 'good sleepers' or amount of night waking

Higley E, Dozier M (2009) Attach Hum Dev



Ferber Method and Attachment

- · Autism and age-ism
- Infant sleep or FDLs 1-4
- Ferber method most effective up to FDL
 3-4
- Sleep routines
- Toddler sleep or FDLs 4-5
 - Age equivalent of 18 months to 2.5 years
 - Attachment & separation starting
 - Fears/anxiety/trauma
 - Nightmares
 - Security
 - Naps and the sleep cycle



"See?! I TOLD you!"

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Ferber Method and Attachment

- Long term randomized controlled trial of Ferber with 8-10 month olds revealed no long terms side effects on psychological functions of children (Price et al (2021) Pediatrics
- More important is the sensitivity and responsiveness of the caretaker during all interactions
- At night it is important to give <u>one clear message</u> to the child and not be ambivalent or confusing
 - Sometimes taking them into bed and other times letting them
- Ferber is hard on the parents who cannot tolerate the crying

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SOA: "Falling asleep alone in their bed with nothing."

- · Takes time—usually a few weeks
- If parents lie down change the pattern by:
 - Sitting on the bed for a few nights
 - Then sitting in a chair beside the bed
 - Continue sitting in the chair, but move it farther from the bed each night until
 - Parent is out of the room and out of visual contact
- · Reduce the amount of attention such as talking, facial expressions, or eye contact

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Summary: ASD and Sleep



- Children with ASD are prone to sleep problems
- · Make sure it's not physical (e.g. snoring/apnea) or medical (e.g. medications) first.
- · Most of the problems can be addressed with:
 - Good sleep hygiene and sleep routines
 - Analysis of sleep onset associations
 - Sleep latency analysis (when actual sleep happens)
 - Ferber method
- · If sleep problems persist, refer for medical workup
- · And you will sleep like a baby...

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Newer Articles on Sleep

- https://www.nationaljewish.org/NJH/media/pdf/Meltzer%20References/Reynolds-(2011)-Sleep-and-autism-spectrum-disorders.pdf
 https://www.sleepassociation.org/children-and-sleep/basics-of-sleep-problems-in-children/

- https://www.sleepassociation.org/children-and-sleep/8-tips-help-baby-sleep-night/.
- https://www.sleepassociation.org/children-and-sleep/8-steps-great-sleep/ https://www.statesmar.com/stat/like/2019/08/10/bedime-benefits/jow/substatesmar.com/stat/like/2019/08/10/bedime-benefits/jow/substatesmar.com/news/2019/08/10/ept-ts-talk-good-sleeping-habits-for-kids-especially-once-school-starts https://www.usatoday.com/story/life/2019/08/10/bedtime-benefits/1952244011/

- https://www.aap.org/en-us/about-the-aap/aap-press-room/news-features-and-safety-tips/Pages/Back-to-School-Tips-Getting-the-Year-Off-to-a-Good-Start-from-the-AAP.aspx



Articles on Sleep

- Review Articles
 - 2024 https://pubmed.ncbi.nlm.nih.gov/38680972
- 2015
 https://journals.lww.com/jopn/fulltext/2015/10040/autism_and_sleep_disorders.2.aspx
- Melatonin 2023
- https://www.childrenscolorado.org/just-ask-childrens/articles/melatonin/#:~rtext=%E2%80%9CMost%20people%20wiil%20peopad%20just,may%20benefii%20from%20taking%20melatonin
- **Genetics and Sibs**
 - https://pmc.ncbi.nlm.nih.gov/articles/PMC8848524/#:~:text=Sleep%20 disturbances%20are%20some%20of,NT)%20children4%2D7
- Ferber Method and Attachment

 - https://pmc.ncbi.nlm.nih.gov/articles/PMC3422632/
 https://pubmed.ncbi.nlm.nih.gov/22966034/ Long term effects

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Links and References: Sleep Disorders in ASD

- https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4609586/
- https://www.ncbi.nlm.nih.gov/pubmed/23754339
- https://link.springer.com/article/10.1007/s10803-013-1866-
- J Autism Dev Disord. 2014 Jan;44(1):216-28. doi: 10.1007/s10803-013-1866-z.
- · Parent-based sleep education for children with autism spectrum disorders.
- Malow BA¹, Adkins KW, Reynolds A, Weiss SK, Loh A, Fawkes D, Katz T, Goldman SE, Madduri N, Hundley R, Clemons T.

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