



Sleep and Neurodiversity: Learn to Achieve Healthy Sleep

Presented by

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Web Streamed from Vancouver, British Columbia

Friday, October 1, 2021

Event Schedule

All times are in Pacific Time

9:30 – 10:30	Session 1
10:30 – 10:45	Break
10:45 – 11:45	Session 2
11:45 – 12:30	Lunch
12:30 – 1:30	Session 3
1:30 – 1:45	Break
1:45 – 2:45	Session 4

Tips for Improving the Web Stream Experience:

- Be sure your speakers are on, or headphones are plugged in, and the volume is up.
- Note before the presentation and during breaks, the image and audio will be obscured.
- Close open 'tabs' in your browser. This will use your computer's memory and slow the connection.
- Check that your browser is up to date.
- If video is stuttering or jumpy, change the resolution by clicking on the 'gear' icon (bottom right corner of video).
- To go full screen, click on the 'box' icon in the lower right of the image.
- If you are having trouble with Internet Explorer or Safari, try [Google Chrome](#).

Acknowledgements

ACT – Autism Community Training offers our special thanks to Hilary McClinton & Nicole Shallow from Coastal Ridge Consulting for agreeing to present this important workshop focused on sleep education, providing practical strategies to encourage healthy sleep for neurodiverse children and adults.

As we all work to keep our communities healthy, ACT is pleased to continue our presentations online. Many thanks to the Sheraton Wall Centre and XE Live for supporting our work and making this possible.

Over the years, those who have attended ACT events know that we depend on community collaboration and support to sustain our work as we are a small not-for-profit. We deeply appreciate the many parents and professionals across British Columbia who volunteer their time, donate funds, and help spread the word - especially during these challenging times.

Support Evidence-Based Resources – [Donate to ACT!](#)

Free Resources from ACT

Autism Videos @ ACT (AVA) – Nearly 70 quality online videos available free – without a log-in, thanks to our sponsors. www.actcommunity.ca/videos

ACT's Autism Information Database (the AID) – Like Google for Autism but better! Keyword search nearly 1,400 curated AID records for evidence-informed, practical information resources useful to families and community professionals. www.actcommunity.ca/aid

ACT's BC Community Resources Database – Search by your postal code for professionals and service providers throughout BC. www.actcommunity.ca/aid-search/community

ACT's Autism Manual for B.C - 13 chapters from diagnosis to employment!
www.actcommunity.ca/autism-manual-for-bc

ACT's Monthly News Round-Up & Event Alerts - Sign-up to keep in touch with developments affecting the neuro-diverse community. www.actcommunity.ca/updates

ACT's Facebook - ACT carefully sources interesting, insightful stories to inform our 9,000 followers. www.facebook.com/autismcommunitytraining

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“Sleep is the single most effective thing we can do to reset our brain and body health each day”

Dr. Matthew Walker

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Healthy Sleep Solutions

Hilary McClinton, M. Ed., BCBA

Nicole Shallow, M. Ed., BCBA



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Sleep Science & Behavior Analysis

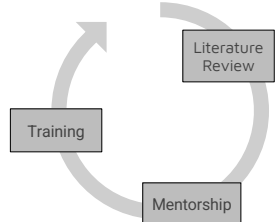


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Specializing

Scope of practice versus competence:

- Learn about sleep
- Literature across fields
- Podcasts, webinars
- Mentor



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Why Tackle Sleep?

Sleep Is the Foundation of Health

- Side Effects of Sleep Deprivation
 - Irritability
 - Memory and Learning
 - Immune System
 - Attention
 - And more.....

Pillars of Wellness

Exercise Food Mental Health

Foundation

Sleep

@coastalridgeaba

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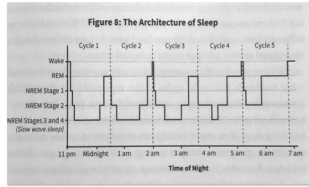
How Long Should We Sleep?

Age	Total Duration	Including Naps
4-12 months	12-15 hours	Yes
1-2 years	11-14 hours	Yes
3-5 years	10-13 hours	Yes
6-12 years	9 - 11 hour	No
13-18 years	8-10 hours	No
18+	7-9 hours	No

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SLEEP ARCHITECTURE

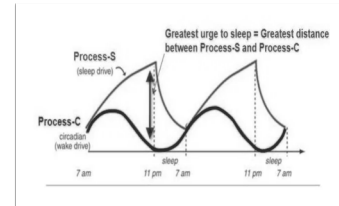
- 5 cycles, 90 minutes each
- We need all stages to achieve health sleep!



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SLEEP PRESSURE

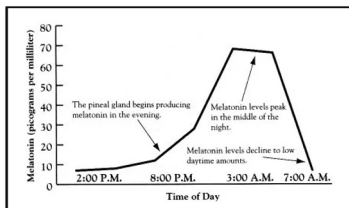
- Sleep pressure works in tandem with body clock.



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Melatonin

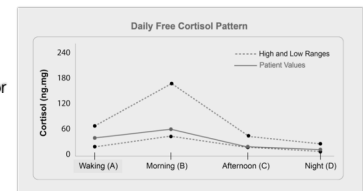
- Hormone produced by pineal gland.
- Prep body for sleep.
- Light stimulates production.



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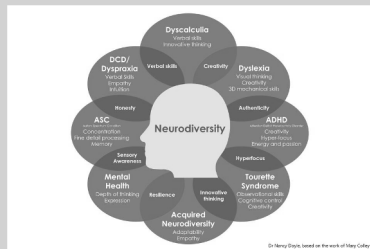
Cortisol / Stress Hormone

- Higher cortisol leads to poor sleep
- Impact other biological processes needed for healthy sleep.



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Sleep and Neurodivergence



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What does research tell us about autism and sleep?

Physiological Components to Poor or Disrupted Sleep:

- Atypical circadian rhythm
- Lower levels of Melatonin
- Higher daily cortisol
- Weaker REM stages of sleep
- Neurotransmitters related to sleep cycles are impaired

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Sleep and Mood

- Sleep Debt and Mood:
 - When an individual has multiple consecutive days of sleep deprivation, they enter "sleep debt," which is a cumulative effect of insufficient sleep for any period of time.
 - Increase anger and impulsivity and anxiety.

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Sleep and Physical Health

- Injury Prevention (Gao et al., 2019) :
 - Athletes who sleep less than 8 hours per night have 1.7 times greater risk of being injured.

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Understanding the Sleep Epidemic

- Canadian Health Measures Survey
 - 1/3 of adults sleep are not getting enough sleep for mental and physical health
- CDC
 - 2/3 of high school students slept less than 8hrs
 - 28-44% adults slept less than 7hrs
 - Lack of sleep correlated to more chronic health conditions (e.g., obesity, asthma, arthritis, cancer, etc.).

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Sleep and Covid-19

- 40% of children experienced negative effects on sleep 5 months after pandemic
- Contributing Factors:
 - reduced exercise
 - increased screen time (online learning, occupy time, etc.)
 - stress
 - maladaptive bedtime routines
 - poorer physical and emotional well-being
 - anxiety and fears
 - lack of support and flexibility

Mackenzie et al., 2021

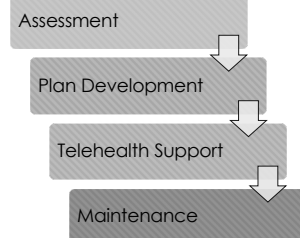
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Sleep Through Behavior Analytic Lens

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Solving Sleep Struggles



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Telehealth and Parent Coaching



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Sleep Assessment

- Review family values and goals
- Daily Routines
 - Meal habits
 - Exercise
- Bedtime Routines
- Sleep problems
- Environment
- Discuss possible solutions for plans

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Data Sheet – Sleep Diary Tracking

Date:	Sept 23	Sept 24	Sept 25
Time In Bed	10:30	11:00	10:45
Time Asleep	11:00pm	12:00	11:00
Time of Night Wakings	1:00-2:00am	3-4	N/A
Time Awake	9am	10	8:00
Total Sleep	10 hours	9 hours	9hours

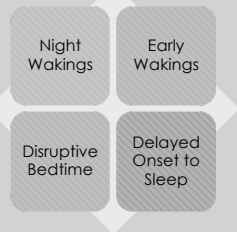
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Medical Considerations

Dental Issues	Gastrointestinal Issues (IBS, constipation, etc.)
Anemia/Low Iron	Anxiety
Seizures	Snoring/Breathing with Mouth Open
Restless Legs	Traumatic Brain Injury

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Common Sleep Problems



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Sleep Dependencies!



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Case Study 1 : Supporting a Toddler Consolidating Sleep

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Case Description:

3 years old, ASD

Taking 1-2+ hours to fall asleep

Inconsistent nap and sleep times.

High energy in the evenings – difficulty settling down.

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Parent Goals

Increase Overall Sleep Duration

Address Night Wakings

Decrease time to fall asleep

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Part 1: Regular Daily Meal Schedule

Strategies to adjust daily schedules

☐ Use of visual schedule.

☐ Preloading change.

☐ Pre-plan meals to help with consistency

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2 hours before	1.5 hours before	30 minutes before goal asleep time	15 minutes before goal asleep time
Start to limit Screen Time	High quality attention/activities with parents.	Bathroom routine	Tuck in to bed. Last cuddle
Shower or bath	Dim the lights in the house / reduce blue lights.	Get into bed and do some calming activities.	Wait on the floor until fall asleep
Last snack		White noise machine on	

Part 2: Implement New Bedtime Routine

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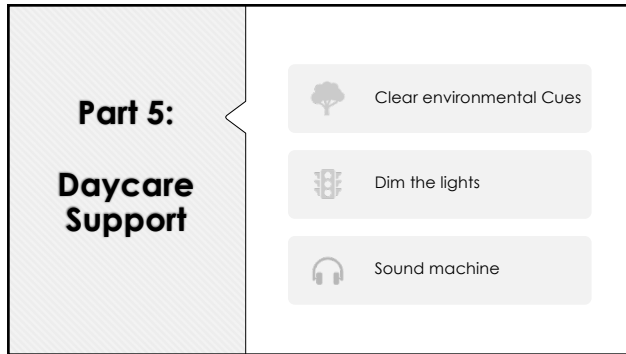
Part 3: Sleep Restriction

What it is: is a method where we take the average duration of sleep across a week, and calculate 90-95% of that number. If the average is 10 hours, 90% is 9 hours

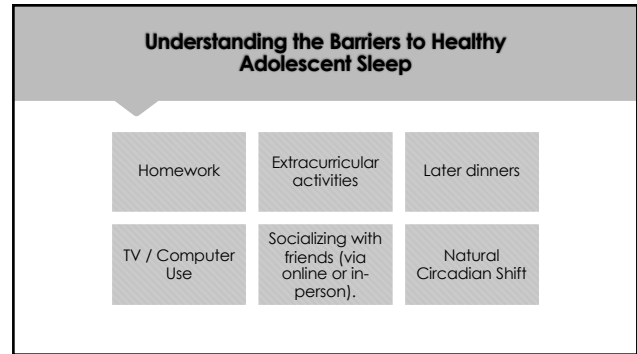
Benefit: likely to sleep for longer chunks, night wakings to be reduced or eliminated. Often does not include emotional reactions.

Risks: may get less sleep for the first couple of weeks as the length of consolidated sleep is extended.

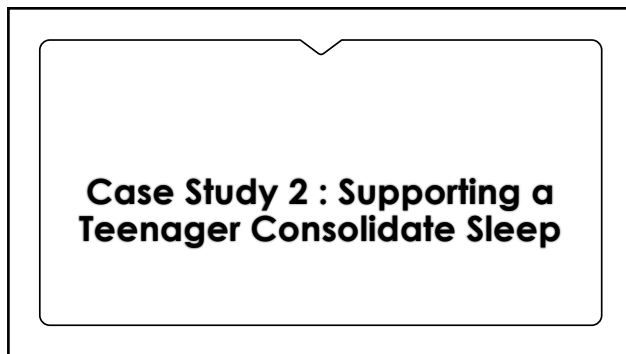
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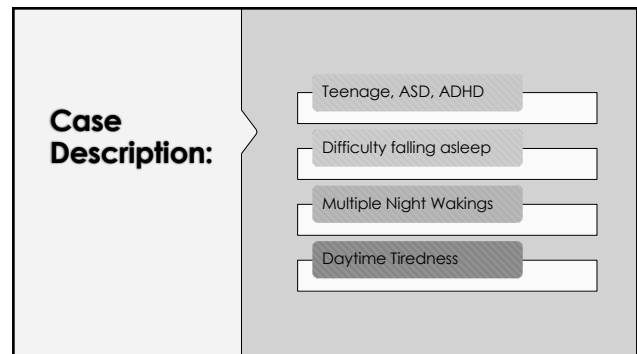
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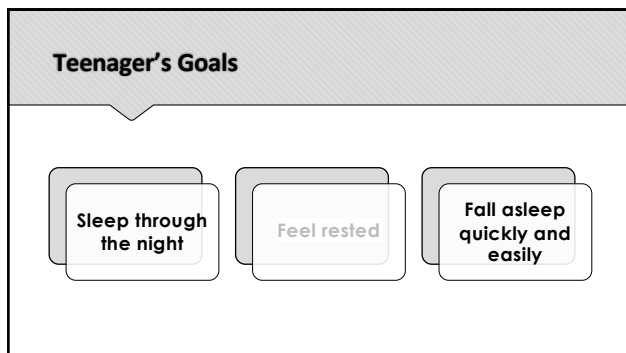
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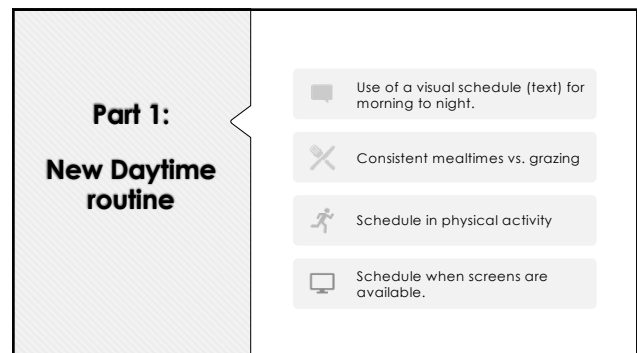
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Part 2: Changes to the Bedroom / Chill Space

- 1
Create a calming space for screen use/chill time during the day.
- 2
Dark blinds and remove extra lights
- 3
Fan for cooling
- 4
Remove phones from the room before bedtime.

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Part 3: Bedtime Fading and Consistent Wake Times

What is it: Calculate average fall asleep time and schedule new bedtime to be 30 minutes later. Tracking done with Apple Watch

Risks: may not fall asleep right away, may get less sleep over the first few nights.

Benefits: increase likelihood fall asleep within 15-30 minutes of going to bed. Less time spent in bed awake. Can decrease night waking with consistent wake time.

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Part 4: Plan for Night Wakings

Option 1: Get out of bed if awake for 15 minutes, turn on red light and read for 15-30 minutes sitting up in bed.

Option 2: Sleep Restriction

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Part 5: Shifting Schedule for School

Bedtime earlier each night by 15 minutes for 2 weeks.

Maintain mealtime and exercise in the day.

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Tips for Success when Collaborating with Teens

- Identify their values and goals
- Collaboration in Decision Making
- Include many different options
- Explain rationales when making recommendations.
- Visually show progress to help motivation
- Set realistic expectations when it comes to screen use/bedtimes.

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Addressing Night Wakings

- First step – teach them to fall asleep on their own the first time.
- Why do Night Wakings occur (sleep dependencies)

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Case Study 3 : Fading Parent Presence

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Case Description:

Preschooler, ASD, ADHD

Parent presence to fall asleep

Multiple Night Wakings

Fade medication

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Parent Goals

Sleep through the night

Fall asleep on their own

Fade medication

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Part 1: Prepare for Start Night

1

Clear signals that it's time to sleep: dim lights, calm activities

2

Tighten up pre-bed routine, individual to each parent

3

Fade medication

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Part 2: Time-Based Visiting (NCR)


- Fade based on time
- Flexible based on child response

1 st night	1 step	2 step	3 step	5 step	Door	1s	5s	10s	etc. (see data sheet)
1 st night	1s	5s	10s	30s	1m	5m	10m	30m	
2 nd night	5s	10s	30s	1m	5m	10m	30m		
3 rd night	10s	30s	1m	5m	10m	30m			
4 th night	30s	1m	5m	10m	30m				
5 th night	1m	5m	10m	30m					
6 th night	5m	10m	30m						
7 th night	10m	30m							
8 th night	30m								

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Part 3: Plan for Night Waking

 **Option 1:** Put the child back to bed, start Time Based Visiting

 **Option 2:** When they do not wake up, leave it alone.

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Part 4:
Other Considerations

Transfer to grandparents home

Fade Melatonin

Maintain

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Case Study 4 : A mix of everything!

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Case Description:

Preschooler, ASD

Difficulty falling asleep

Multiple Night Wakings

Daytime Tiredness

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Parent Goals

Sleep through the night

Feel rested

Fall asleep quickly and easily

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2 hours before	1.5 hours before	30 minutes before goal asleep time	15 minutes before goal asleep time
Start to limit Screen Time	High quality attention/activities with parents.	Bathroom routine	Tuck in to bed. Last cuddle
Shower or bath	Dim the lights in the house / reduce blue lights.	Get into bed and do some calming activities.	
Last snack		White noise machine on	

Part 1: Implement New Bedtime Routine

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Part 2: Plan Components

1
Time Based Visiting

2
Bedtime Pass

3
Fading Light

4
Night Waking

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Sleep and Medication

Medication Risks

Sedated Sleep vs. Healthy sleep

Melatonin

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Setting up our Days to Support Healthy Sleep

24+ hours body clock

Physical Activity

Light

Eating Routines

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Top 3 Changes to Make Today!

Consistent Sleep and Wake Times

Regulate Light

Meal Schedule

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Healthy Sleep Solutions

Thank you for coming!

Our services are 100% remote and provide peer support for ages 2+.

We also provide mentorship for SCBA and SCBA's in developing competency in sleep.

If you would like to learn more please follow us on [Facebook](#) or [read it on a blog](#)

Contact Information

- Email: info@healthysleepsolutions.ca
- Website: www.healthysleepsolutions.ca
- Instagram: [@healthysleepsolutions](https://www.instagram.com/healthysleepsolutions)

Sleep Better!

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