

ADHD & Sleep Workshop with Dr James Brown Stream: 6:30pm | Talk Starts: 6:35pm

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CONTENT IDEAS

ADHD

OCD

Autism

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Neurodiversity & Mental Health

Women & Neurodiversity

Neurodiversity in the Workplace

Mental Health

- AnxietyBurnoutHappiness
- Depression
- Trauma
- Psychedelics

Neurodiversity



Health & Wellness



- Our Gut Microbiome
- · Healthy Eating
- Women's Health & The Workplace
- The Power of Kindness
- How the Mind Heals the Body
- Hormonal Contraception





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The Basics of ADHD







Neurotransmitters and synapses



'Divergent' Brain Areas in ADHD

Posterior cingulate

cortex (Internal attention)

Thalamus (Relay station, attention Alertness and asleep)

Striatum

(Reward, task gating, hyperkinetic movement)



Prefrontal cortex

(Executive functions)

Anterior cingulate cortex

(External attention, reward and motivation)

> **Hippocampus** (Time perception and emotions)

Amygdala (Negative emotions)

The Symptoms of ADHD

Inattentiveness

- 1. Making careless mistakes/lacking attention to detail
- 2. Difficulty sustaining attention
- 3. Inability sometimes to listen when spoken to directly
- 4. Failure to follow through on tasks and instructions
- 5. Exhibiting poor organisation
- 6. Avoiding/disliking tasks requiring sustained mental effort
- 7. Losing things necessary for tasks/activities
- 8. Being easily distracted (including unrelated thoughts)
- 9. Being forgetful in daily activities

Hyperactivity/Impulsivity

- 1. Fidgeting with or tapping hands or feet, squirming in seat
- 2. Leaving seat in situations when remaining seated is expected
- 3. Experiencing feelings of restlessness
- 4. Having difficulty engaging in quiet, leisurely activities
- 5. Being "on-the-go" or acting as if "driven by a motor"
- 6. Talking excessively
- 7. Blurting out answers
- 8. Having difficulty waiting for your turn
- 9. Interrupting or intruding on others



Common 'Non-diagnostic' ADHD Symptoms

- Emotional dysregulation.
- Rejection-sensitive dysphoria (RSD).
- Time blindness.
- <u>Sleep issues.</u>



The Science of Sleep



Poll: Sleep Patterns

"How would you describe your typical sleep pattern?"



The Biology of Sleep



The Importance of Getting the Right Amount of Sleep

- The quantity and quality of sleep are vital for overall health.
- Adults typically need 7-9 hours of sleep per night.
- Inadequate sleep can lead to a host of health issues:
 - Physical Health
 - Mental Health
 - Emotional Well-being
 - Performance and Safety
 - Longevity



Sleep Stages

- Sleep can be divided into two main types:
 - Rapid Eye Movement (REM) sleep.
 - Non-Rapid Eye Movement (NREM) sleep.
- NREM sleep is divided into three stages:
- N1 LIGHT
- N2 DEEPER
- N3 DEEPEST



Sleep Cycles





Sleepfoundation.org

Sleep Stages



jbhd

Circadian Rhythm



GENETICS

SOCIAL CUES

EXERCISE

TEMPERATURE





Internal Clocks

- Clock genes (in the eyes and other tissues).
- They encode proteins that regulate daily physiological processes.
- Influence the production of melatonin from pineal gland.
- Melatonin promotes sleep.





ADHD & Sleep



ADHD is a 24-hour disorder



Poll: Sleep Quality

"How often do you feel rested and refreshed after a night's sleep?"



<u>All adults with ADHD should be</u> evaluated for sleep problems.



• 'High nocturnal activity' and disordered sleep were defining characteristics of 'hyperkinetic reaction in childhood' or 'attention deficit disorder' in earlier versions of the DSM.

• Removed in revised edition.



80% of adults with ADHD report sleep problems.
Only 7.5% are diagnosed (1.5% in non-ADHD population).

"If we stopped testing, we'd have very few cases" – D.
 Trump, 2020.



- Clock genes are mutated in some ADHD adults.
- Circadian rhythm is then shifted later.

e.g. urge to sleep may be delayed by 90-120 minutes



• ADHD adults with sleep problems perform worse on tests of attention.



• Increased nocturnal activity is common.





Movement

Brain Activity





Excessive Daytime Sleepiness



Poll: Sleep Quality

"How much do you believe your ADHD symptoms impact your sleep quality?"



ADHD & Sleep Disorders

- Delayed sleep onset.
- Reduced sleep quality.
- Insomnia.
- Circadian rhythm disturbances.
- Night awakenings.
- Restless legs syndrome/Periodic limb movement disorder.
- Obstructive sleep apnoea.



ADHD Medication & Sleep

- Stimulants can have diverse effects:
 - Methylphenidate can improve sleep in some people.
 - Lisdexamfetamine and atomoxetine can worsen sleep in some people.
 - Stimulants can mask daytime sleepiness.



LET'S TAKE A BREAK...



with Dr Alex Conner Starting Mon 23 Sep | 6pm | Online





Approaches to Improve Sleep with ADHD.



Start with your routine...



Approaches

- 1. Sleep hygiene.
- 2. Bright light therapy.
- 3. Sleep Training.
- 4. Exercise.
- 5. Melatonin often needs behavioural support.
- 6. Weighted blankets .



1. Sleep Hygiene

- AKA 'The stuff we know we need to do, but don't'.
- Good advice on Sleep Foundation website:





Sleep Hygiene (1)

- 1. Maintain a Consistent Sleep Schedule
- 2. Create a Relaxing Bedtime Routine
- 3. Limit Naps
- 4. Optimise Your Sleep Environment
- 5. Invest in a Comfortable Mattress and Pillows
- 6. Limit Exposure to Artificial/Blue Light
- 7. Be Mindful of Food and Drink
- 8. Exercise Regularly
- 9. Manage Stress and Anxiety
- 10. Limit Fluid Intake Before Bed



Sleep Hygiene

11. Get Exposure to Natural Light
12. Reserve Your Bed for Sleep and Intimacy Only
13. Wake Up Naturally
14. Create a Comfortable Pre-Sleep Routine
15. Limit Nicotine
16. Maintain a Healthy Diet





"Which of the following sleep hygiene practices do you regularly follow?"

Poll: Sleep Quality

2. Bright/Natural Light Therapy

- Has strongest evidence base for ADHD.
- Advances the circadian clock to shift sleep-wake rhythms earlier.
- Can improve delayed sleep onset (unlikely in severe delayed sleep onset).
- Caution: photophobia.





Bright Light Therapy in ADHD

- Three studies show that BLT:
 - Brings forward melatonin.
 - Brings forward 'mid sleep' time.
 - Decreased ADHD symptoms.
 - Decreased daytime sleepiness.



SEED jbhd

3. Sleep Training

- Online courses available.
- Cognitive Behavioural Therapy for Insomnia (CBTi).
- 5 stages
 - Cognitive therapy
 - Stimulus Control
 - Sleep restriction
 - Sleep Hygiene
 - Relaxation
- One study reported prolonged benefits in ADHD.



CBT-i

- *Possibly* available on NHS (check with GP or Sleepstation)
- NHS Self-help guide below:





Melatonin Supplementation

- NHS approved for childhood ADHD.
- Adults under 55 usually require a specialist for a prescription.
- Melatonin advanced circadian rhythm by 1 hour and 28 minutes.
 - Some suggestion that taking 4-6 hours before and then again before sleep may work better.



4. Exercise

- Exercise (at the right time) can:
- Improve sleep quality.
- Reduced the number of midnight awakenings.
- Improve sleep efficiency.
- Reduced sleep onset latency.
- Reduced 'wake after sleep onset'.



5. Weighted Blankets

- Originally developed for autism.
- "Deep pressure therapy activates the parasympathetic nervous system.
- Increases melatonin.
- Insomnia severity improved in ADHD.



Summary

- ADHD is a neurological condition which has sleep at it's core
- Sleep is essential for health and cognitive function
- Adults with ADHD are more likely to have undiagnosed or diagnosed sleep disorders
- Sleep *can* be improved in ADHD.



Resources





Website: JBHD.uk Social media: @adhdadult_james





Website: <u>ADHDadult.uk</u> Social media: @adhdadultuk Online magazine: <u>Focusmag.uk</u> Discord: <u>theadhdadults</u>

Podcast



Website: <u>TheADHDAdults.uk</u> Social media: @theadhdadults



UPCOMING EVENTS ONLINE

AUG Trauma & The Body Workshop With Dr Jane Mulcahy

AUG

20

SEP

08

ADHD & Women 6 Week Course with Dr Anneka Tomlinson

Autism & Women with Dr Rachel Moseley

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