

# The Science of ADHD: Navigating Neurodiversity in a Neurotypical World

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# Emotions, executive function and inhibition...



# 1. The name 🙄

# Shittest name ever...

- We don't have *less* attention\*.
- We are often not externally hyperactivity.
- '***Intention***' rather than '***attention***' maybe describes it better?

\*deficit also means 'impairment' in medical terms



# 2. What ADHD isn't.



# Five (of many) persistent ADHD myths...

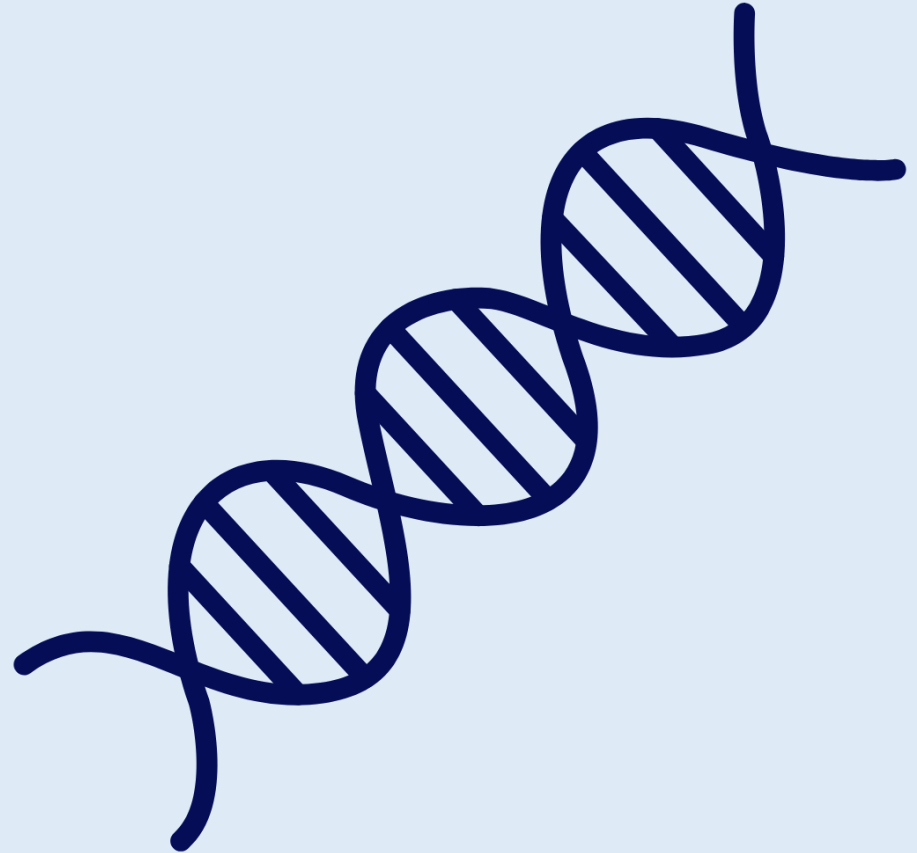
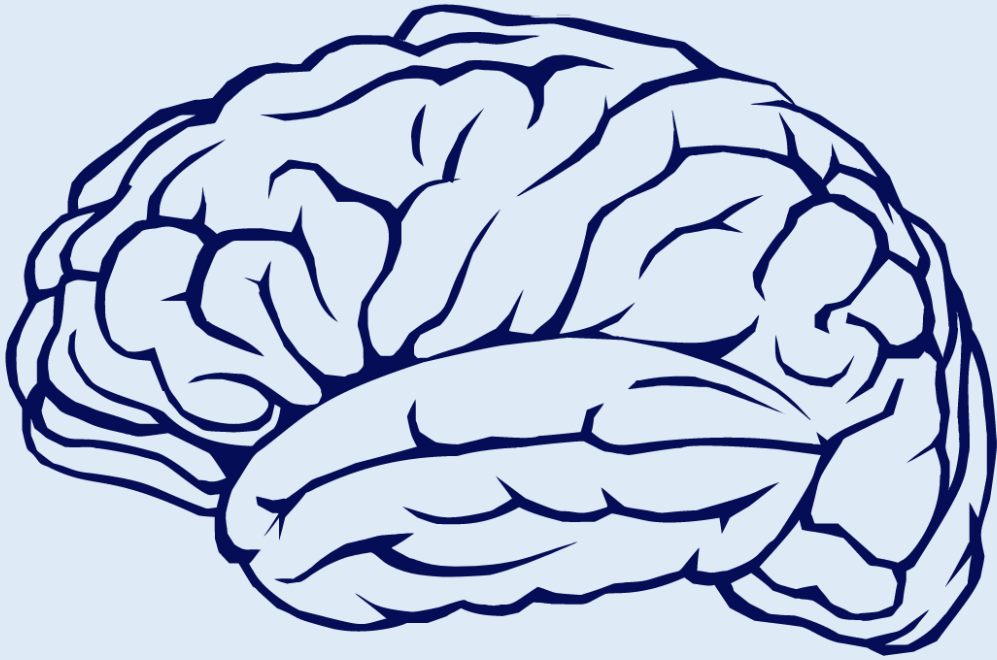
1. ADHD isn't 'real'.
2. ADHD is a 'trendy bandwagon'.
3. It's easy to get a diagnosis of ADHD.
4. ADHD is a disorder of young boys.
5. ADHD is over-diagnosed.

# 3. What ADHD is.





# ADHD is a 'lifelong neurodevelopmental disorder'



# Symptoms of ADHD (inattention)

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





**THSH**  
TOWN HALL BIRMINGHAM    SYMPHONY HALL BIRMINGHAM

Town Hall, Birmingham  
Thu 29 Nov 2018 7.30 PM

Ticket Price	£25.00	TICKETS ARE PURCHASED SUBJECT TO THE TERMS AND CONDITIONS OVERLEAF
Commission	£2.50	

## Red Hot Chilli Pipers

Visit [www.thsh.co.uk](http://www.thsh.co.uk) for up to date performance times

Door E  
Stalls  
Row: A Seat: 15

People around you may stand  
Order ID: 18-CB-0X7V  
Standard

**PLEASE CHECK YOUR TICKETS CAREFULLY**



# Symptoms of ADHD (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



# Non-diagnostic symptoms of ADHD

- Emotional dysregulation.
- Rejection-sensitive dysphoria (RSD).
- Emotional dysregulation.
- Time blindness.
- Alexithymia
- Poorer metacognition

# Treatment of ADHD

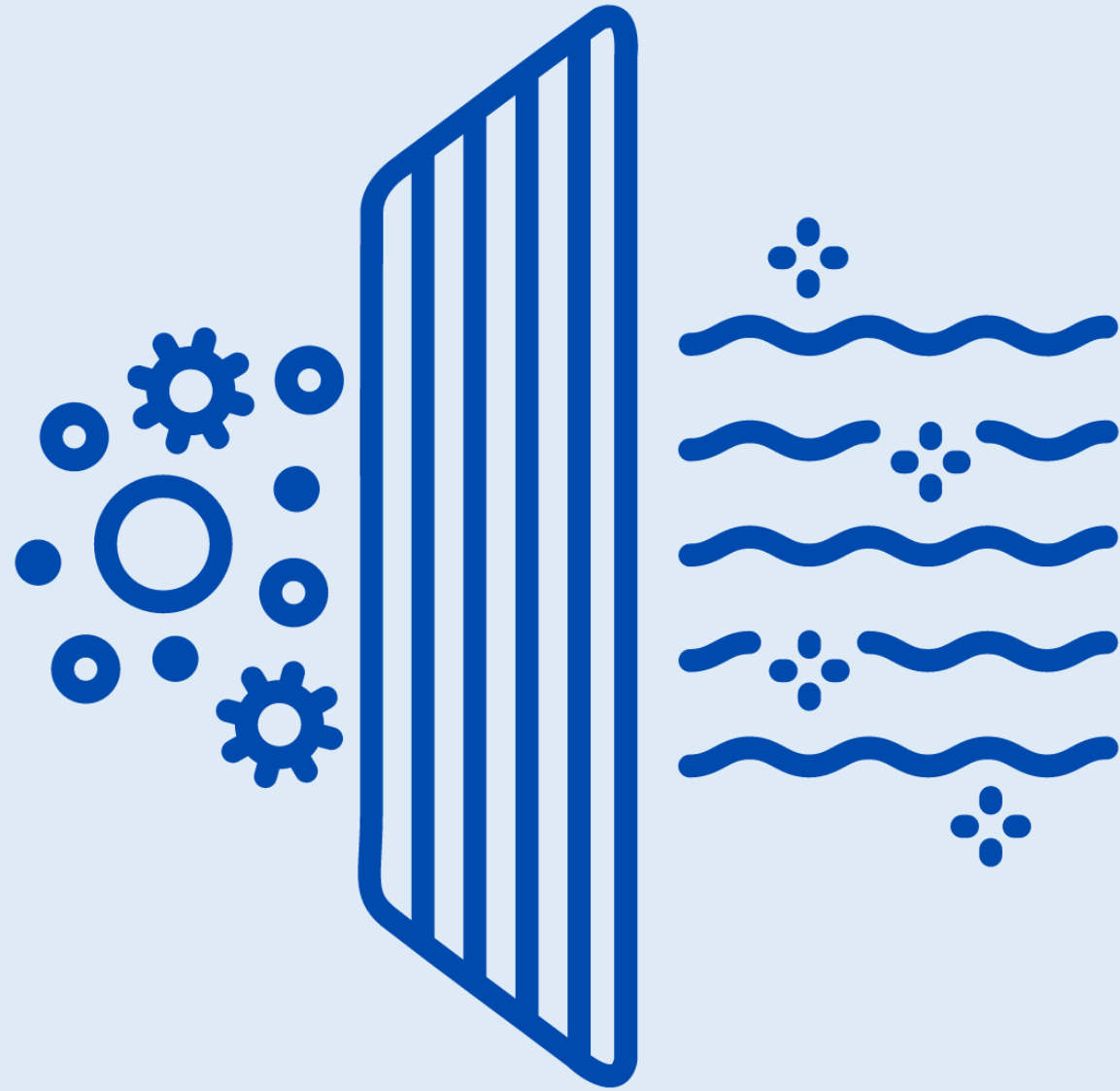


# 4. Brains and ADHD

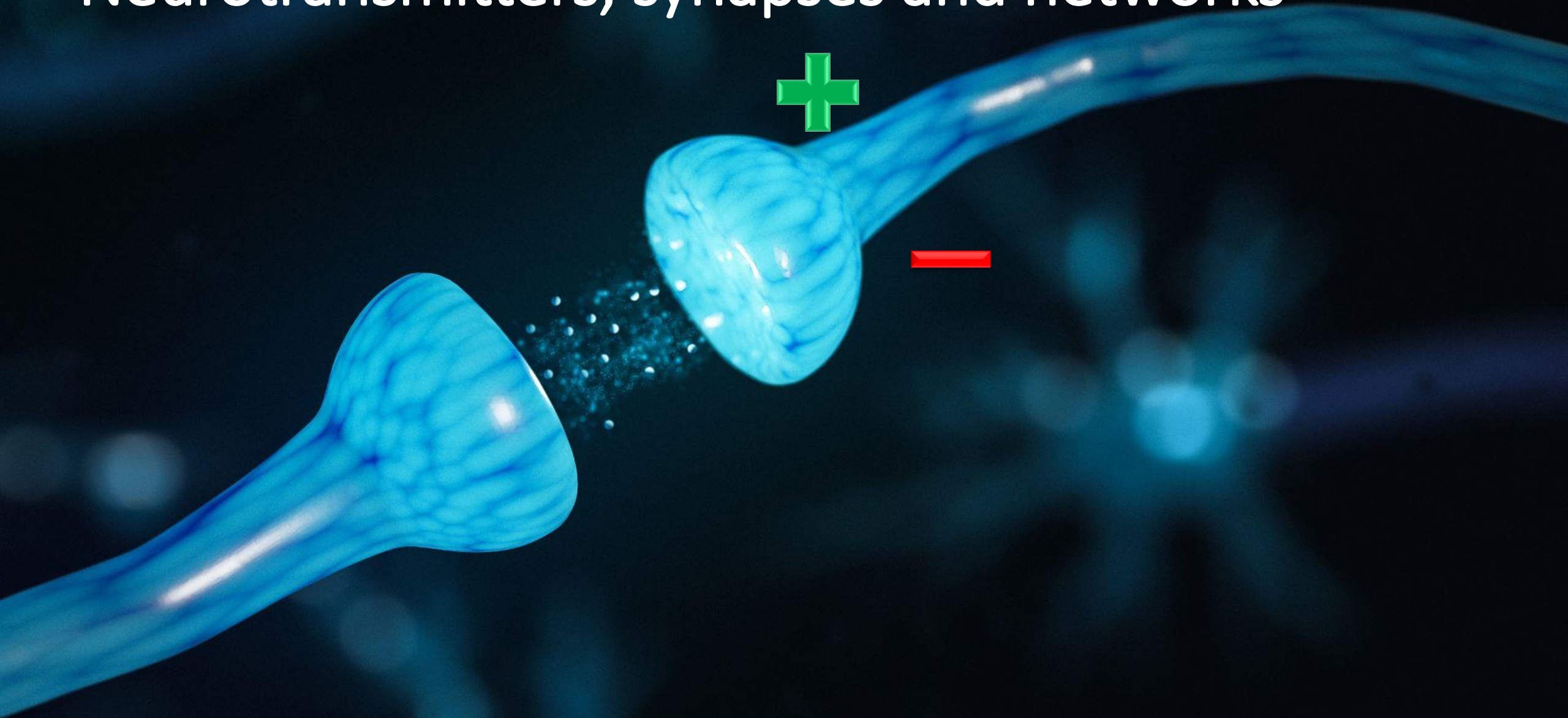




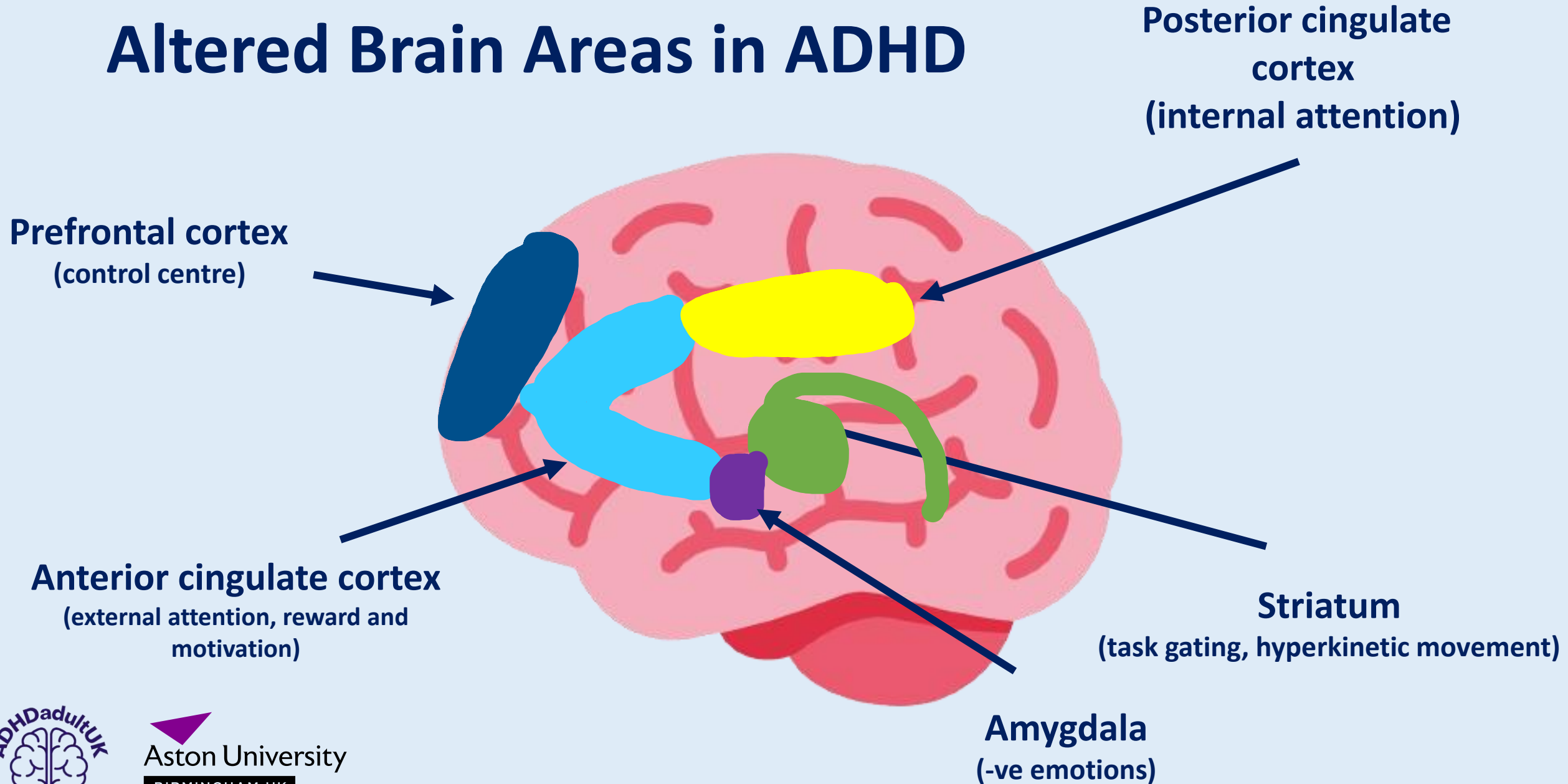




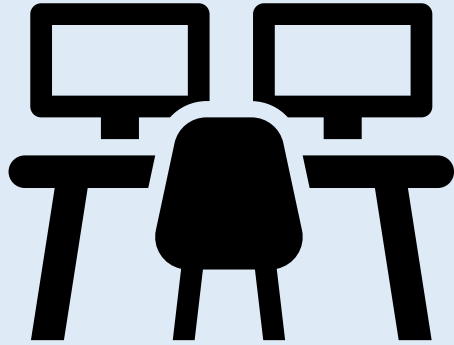
# Neurotransmitters, synapses and networks



# Altered Brain Areas in ADHD



# Dual Circuit' theory of ADHD

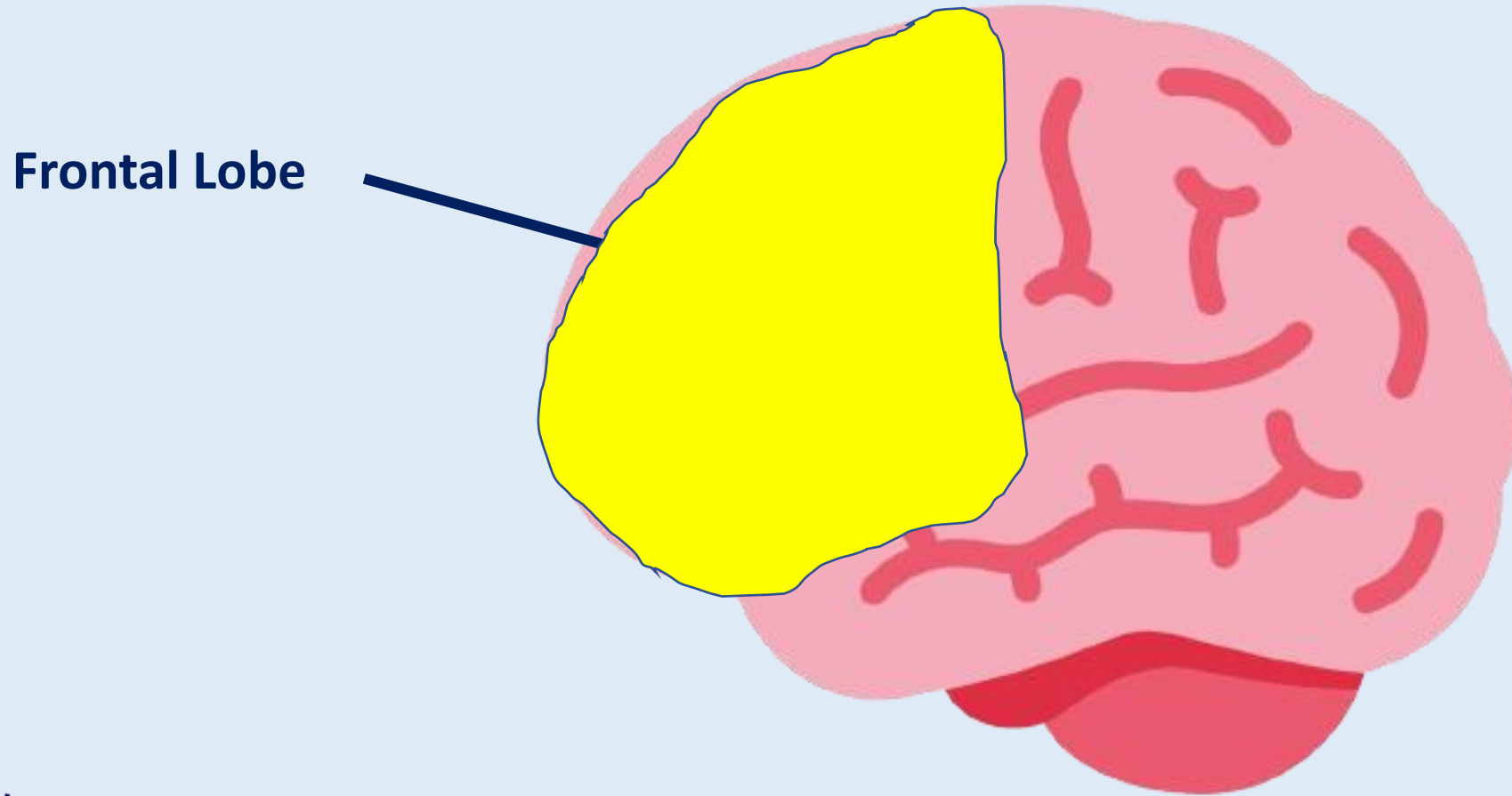


**Ventrolateral and dorsolateral  
cortico-striatal circuitry**  
(executive and inhibitory processes)



**Mesolimbic-ventrostriatal  
circuitry**  
(motivational and reward  
processes)

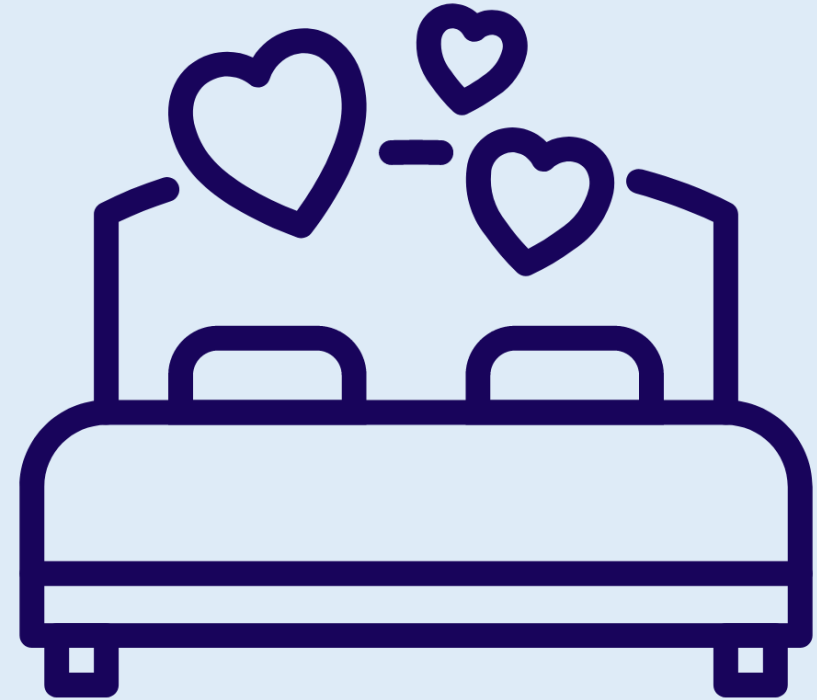
# Altered Brain 'Pruning' in ADHD



# Executive functions in ADHD



# Mind wandering and brain networks





# 5. Reward and ADHD



Reward IS attention...



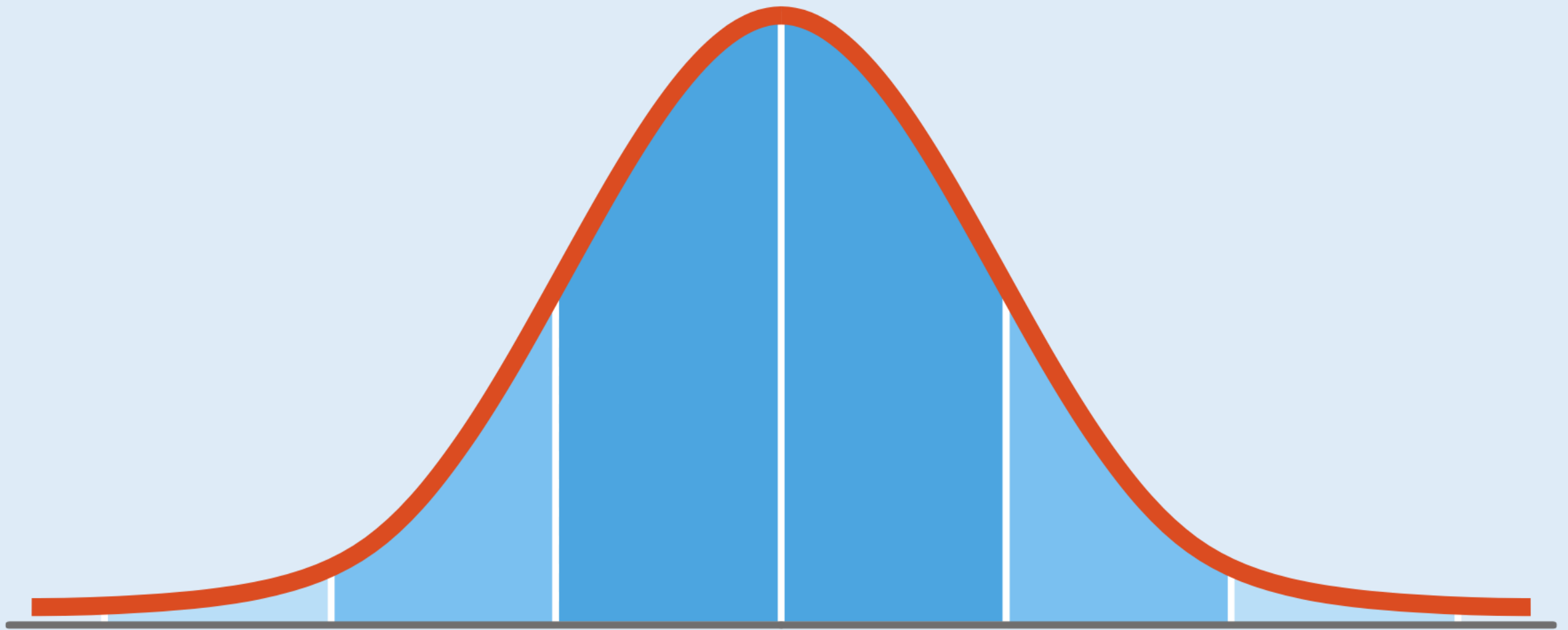






# 6. The burden/strengths of ADHD





# The Burden/Strengths of ADHD

## Burden

- Increased risk of substance use issues, gambling and debt
- Increased unemployment or underemployment
- Less likely to access or stay in higher education
- Increased risk of criminality (30.2% of prisoners have ADHD symptoms)
- Increased accidental injuries
- Increased risk of premature death

## Strengths(?)

- Increased entrepreneurship
- Possibly increased creative thinking





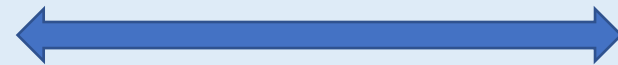
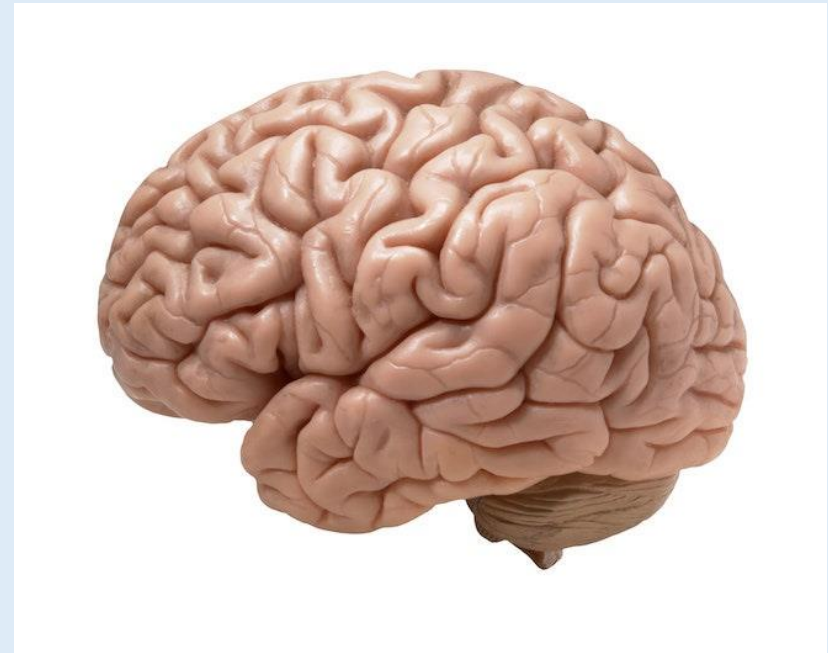
The general population is neurodiverse... and so are we!



ADHD traits benefit society...



# So, aren't we ALL a bit ADHD..?



# The ADHD community is itself neurodiverse...

The 'strengths' ascribed to ADHD likely occur with the same variation in the ADHD population as in the general population



# 7. Navigating the 'neurotypical world'





# Summary

ADHD brains can be anatomically and functionally different from non-ADHD brains

ADHD makes simple things very complicated

Having ADHD can lead to significantly worse outcomes in life

We are often square pegs being forced into round holes by the society around us



# Resources

- [www.ADHDadult.uk](http://www.ADHDadult.uk)
- Discord - theadhdadults
- Online magazine - Focusmag.uk



@theadhdadults (and @adhdadult\_james)

