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# Introduction to Neuro-diversity

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The Adult and Adolescent Neuro-diversity Handbook (2009)

# Aims of the Day

- To increase knowledge and understanding of a range of neuro-diverse conditions.
- To consider ways of working which support young people and adults with neuro-diverse conditions.

# Neuro-diversity

- Brain wiring
- Left-right hemispheres not working together
- Information processing
- 'Oddness'
- Inherited/genetic factors
- Co-morbidity
- Anxiety / stress
- Depression
- Asperger Syndrome
- Dyslexia
- Dyspraxia
- Dyscalculia
- OCD
- ADHD
- Tourette's Syndrome
- Anxiety Disorders

# Left and Right Brain

## • **LEFT BRAIN FUNCTIONS**

uses logic  
detail oriented  
facts rule  
words and language  
present and past  
math and science  
can comprehend  
knowing  
acknowledges  
order/pattern perception  
knows object name  
reality based  
forms strategies  
practical  
safe

## • **RIGHT BRAIN FUNCTIONS**

uses feeling  
"big picture" oriented  
imagination rules  
symbols and images  
present and future  
philosophy & religion  
can "get it" (i.e. meaning)  
believes  
appreciates  
spatial perception  
knows object function  
fantasy based  
presents possibilities  
impetuous  
risk taking

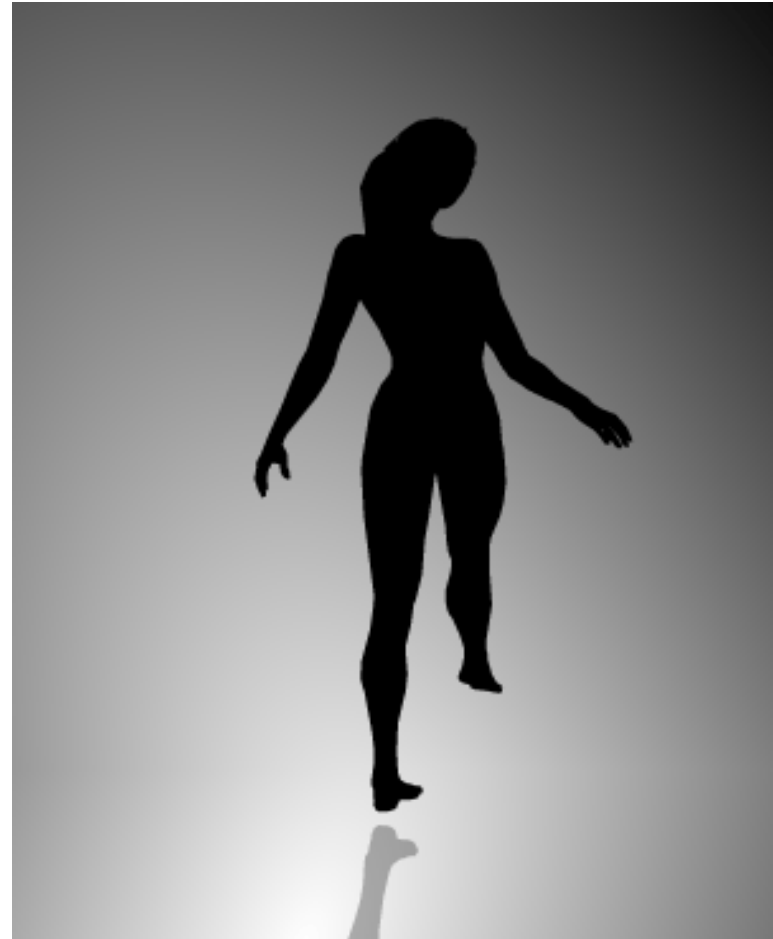
# Left and Right Brain Test

Which direction is the dancer turning?

Right brain – clockwise

Left brain – anti-clockwise

You can change her direction if you focus



# Autistic Spectrum

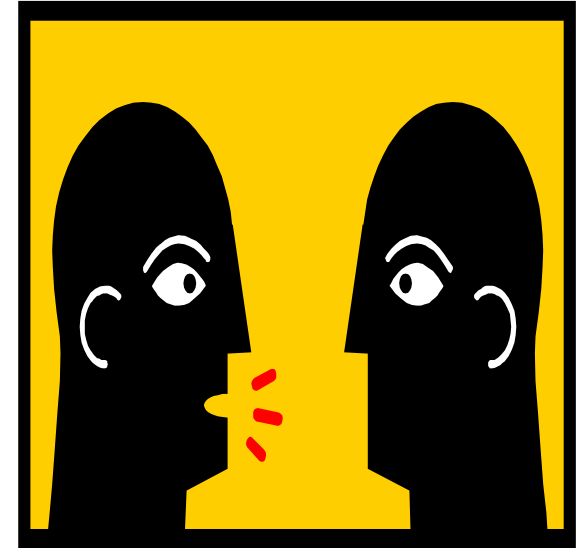
- Social Language and Communication
- Social Imagination
- Social Interaction
  
- plus:
- Sensory Issues
- Information Processing
- Motor Skills





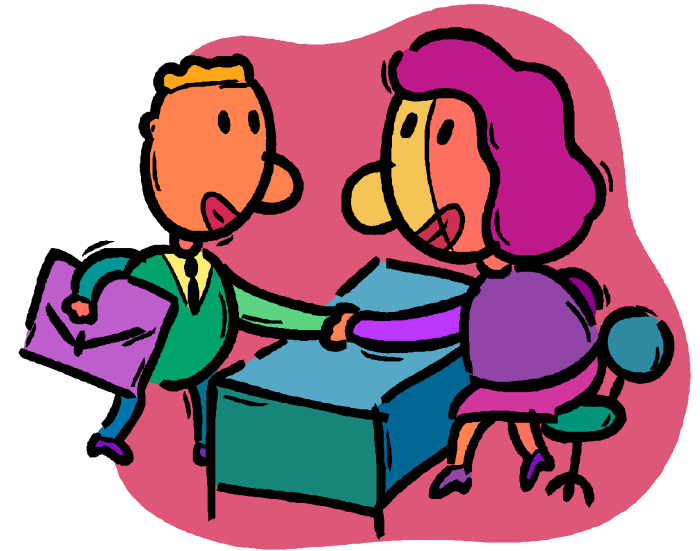
# Asperger Syndrome

- Autistic Spectrum Condition with no learning disability
- Difficulties with eye contact, reading faces, tone of voice
- Literal understanding of language
- Lack of understanding of social rules
- Prefer routines, predictability
- Dislike change – risk averse
- High anxiety – world is very confusing



# Asperger Syndrome

- Hard to imagine consequences
- Intense interests
- Not a team player
- Looking for rules/certainty
- Small social circle
- Can be socially isolated
- Poor short-term memory
- Poor organisation
- Black/white – all/nothing views





# ADHD

- Procrastination – hard to begin a task
- Quick tempered and easily irritated
- Doesn't finish things before starting new ones
- Forgetful and often losing things
- Speaks very rapidly and loudly
- Always moving their body – unable to be still
- Unable to maintain focus and attention
- Poor at reading facial expressions



# ADHD

- Interrupts people with own ideas – poor listener
- May be a risk-taker with limited perception of danger
- Impatient – has to do everything ‘now’
- Hard to consider another’s perspective
- Self-focused
- Speed over quality
- Low understanding of consequences



# Dyspraxia

- Body movement
- Bumping into things
- Untidy clothes
- Poor at sport
- Poor short-term memory
- Word pronunciation
- Social communication difficulties
- Inappropriate interruptions
- Erratic spelling
- Slow to complete work
- Lots of mistakes



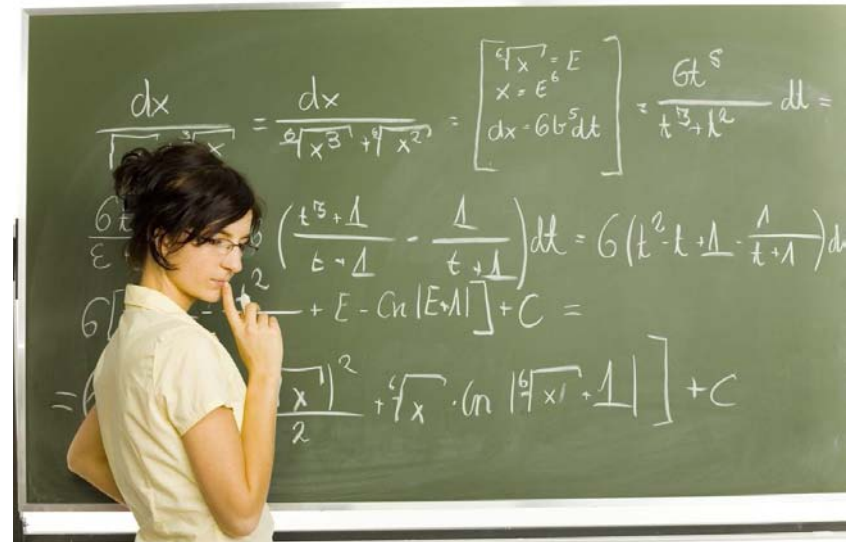
# Tourette Syndrome

- Involuntary 'tics'
- Motor tics - body and facial movements
- Vocal tics – noises and words
- Better when engaged in activity
- Sometimes worse when relaxed
- May suppress for while
- Self-conscious – anxiety, stress
- Corporalia – swearing – 10%



# Dyscalculia

- Difficulty understanding concepts of numbers
- Size order
- Concept of time
- Money
- Sequencing
- Organising information
- Ordering
- **Not** simply 'bad at maths'



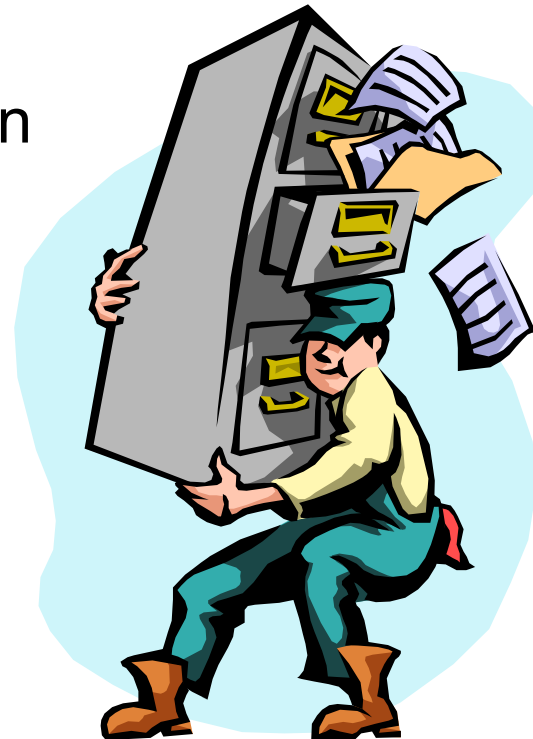
# Strategies for young people with neuro-diverse conditions

- Clear, concise communication
- Back up verbal with written
- Allow time for slower information processing
- Support planning and organisation
- Memory aids
- Recognise different abilities
- Play to strengths
- Accept student for who they are
- Lots of praise and positive feedback

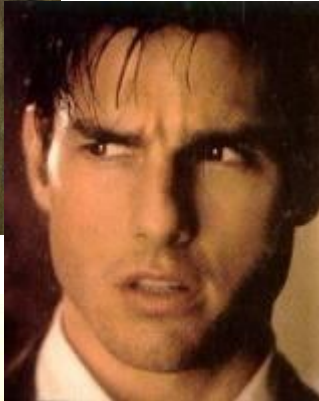


# Educational Approaches

- Extra time – writing
- Extra time – processing information
- Clear written handouts
- Show how to do something more than once
- Allow breaks and movement
- Show what is expected
- Allow alternative assessment (presentation, practical, creative)
- Help with time management and planning
- Colour coding or other multi-sensory strategies



# Neuro-diverse Celebrities



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