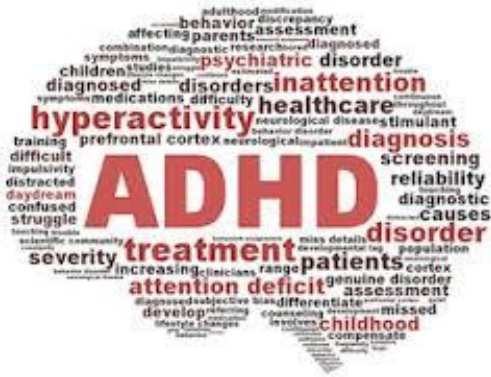




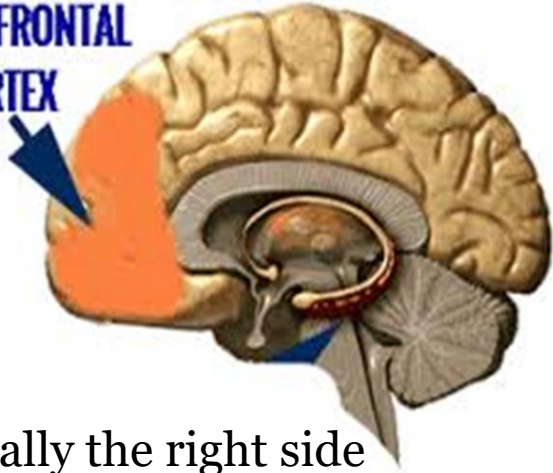
Life without ~~breaks~~ brakes: ADHD in context!

Dr Charlotte Greenway



What is ADHD?

PREFRONTAL
CORTEX



Usually the right side



It is a
neurological
problem!

It's a problem
in the area of
the brain that
allows us to
tune out of what
we shouldn't be
focussing on.

It's also the part
of the brain that
controls our
impulses and
social behaviour

In many
children with
ADHD this part
of the brain has
not fully
developed.

Characteristics of ADHD



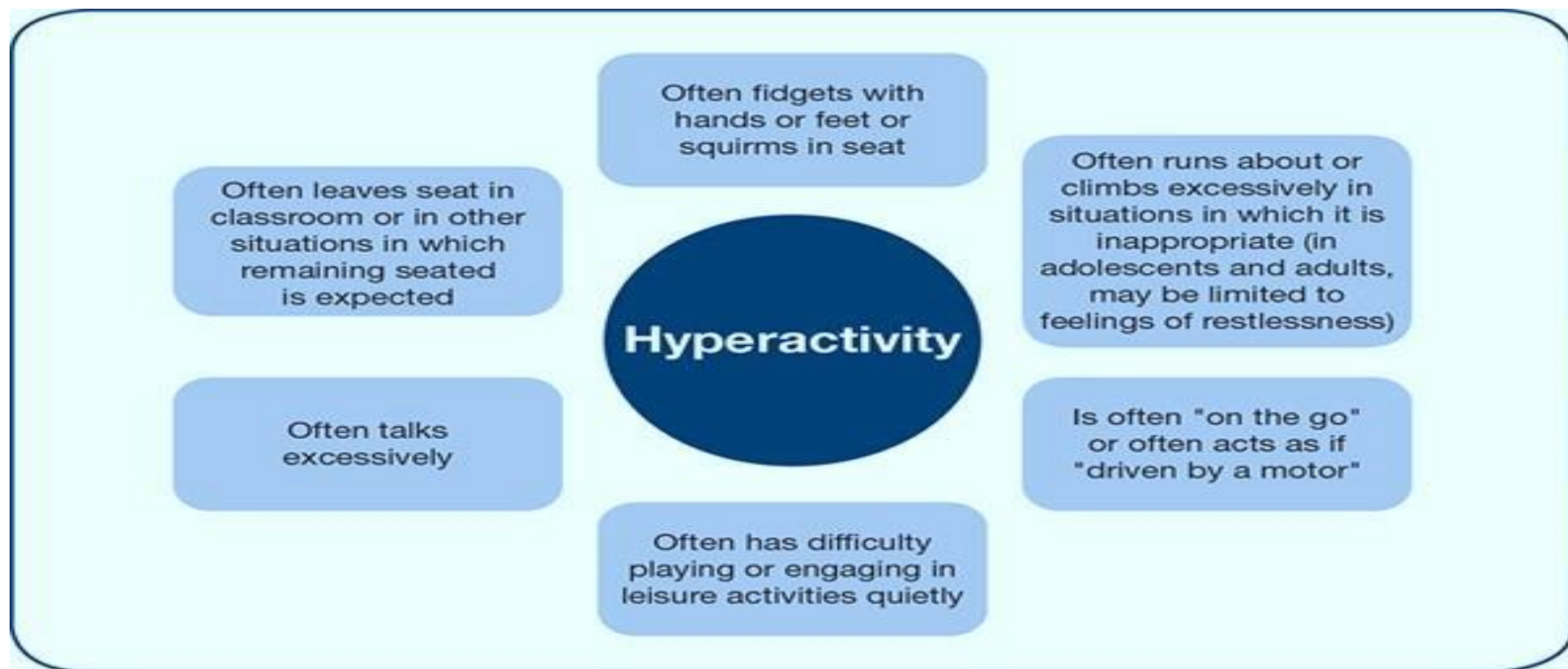
Inattention

Impulsivity

Hyperactivity



Figure created from information in the DSM-5™ and ICD-10 classifications



Impulsivity

Often blurts out answers before questions have been completed

Often has difficulty awaiting turn

Often interrupts or intrudes on others



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Presentation of ADHD

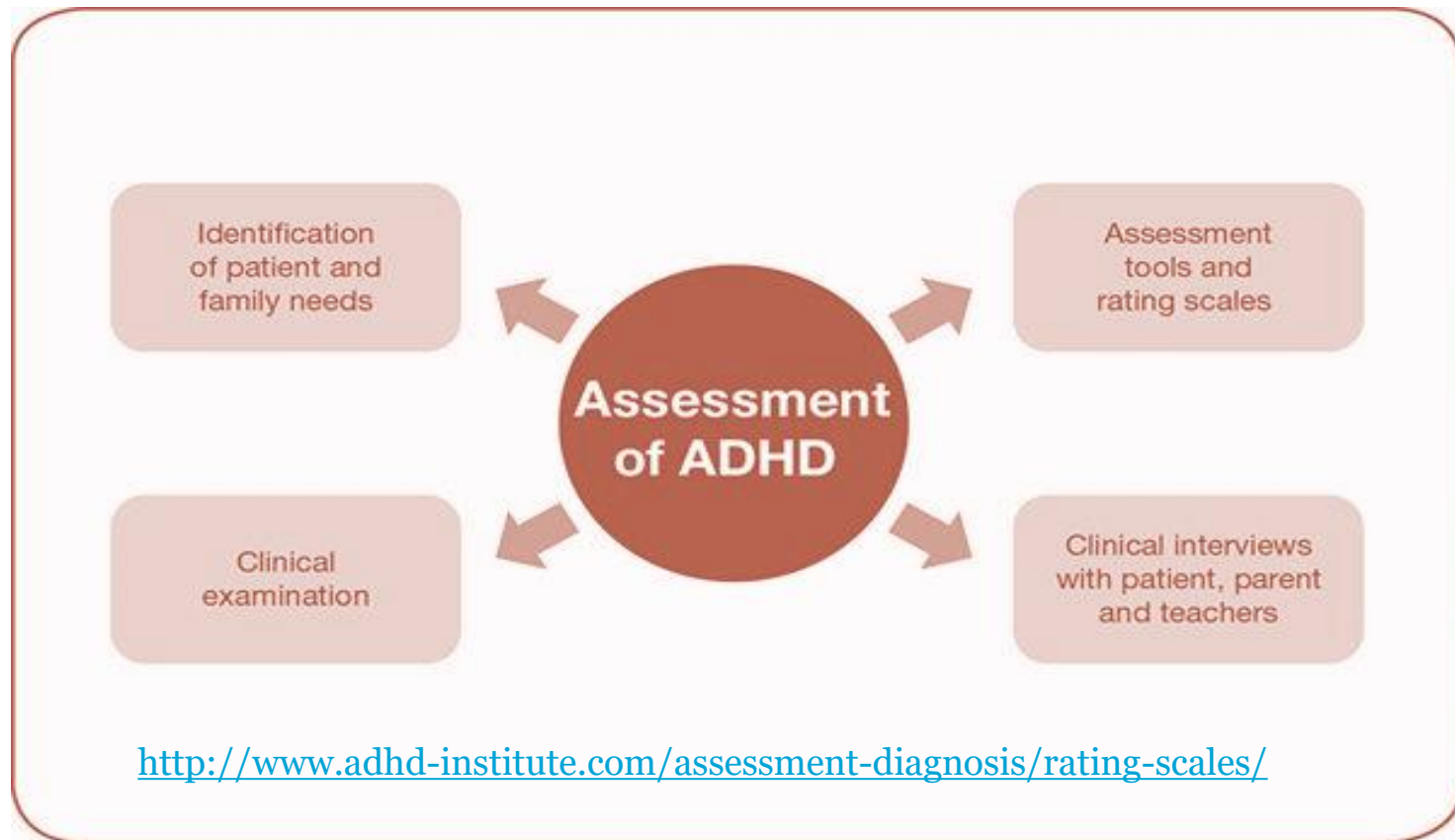
<i>Combined</i>	<i>Inattentive</i>	<i>Hyperactive/impulsive</i>
All three core features are present and ADHD is diagnosed when ≥ 6 symptoms of hyperactivity/impulsivity and ≥ 6 symptoms of inattention have been observed for ≥ 6 months	Diagnosed if ≥ 6 symptoms of inattention (but < 6 symptoms of hyperactivity/impulsivity) have persisted for ≥ 6 months	Diagnosed if ≥ 6 symptoms of hyperactivity/impulsivity (but < 6 symptoms of inattention) have been present for ≥ 6 months

Current severity of ADHD

<i>Mild</i>	<i>Moderate</i>	<i>Severe</i>
Few, if any, symptoms in excess of those required to make the diagnosis are present, and symptoms result in no more than minor impairments in social or educational functioning	Symptoms or functional impairment between “mild” and “severe” are present DSM-V, APA (2013)	Many symptoms in excess of those required to make the diagnosis, or several symptoms that are particularly severe, are present; or the symptoms result in marked impairment in social or educational functioning



There is currently no single available tool
for the diagnosis



Formal diagnosis is made using evidence accumulated from the initial clinical assessment and medical classification systems

Aetiology

- Causes still largely unknown
- What we do know...
 - the occurrence of ADHD is closely tied with biological factors
 - ✦ Size and density of various brain structures
 - ✦ The way chemical reactions take place within the brain

Interplay between multiple genetic (Gizer, Ficks and Waldman, 2009; Larsson, et al. 2013) and environmental risk factors (Grizenko, et al. 2012)

Risk factors that affect the neurobiological basis of the disorder (Cortese, et al. 2012)

Brain structure differences



- Smaller cortex in ADHD
 - thoughts and actions
 - Diminished size usually occurs in the Frontal lobe
 - impulse control
 - socialisation
 - reason
 - judgement

- Not fully developed – neurons in this part of the brain are needed for focussing, paying attention.



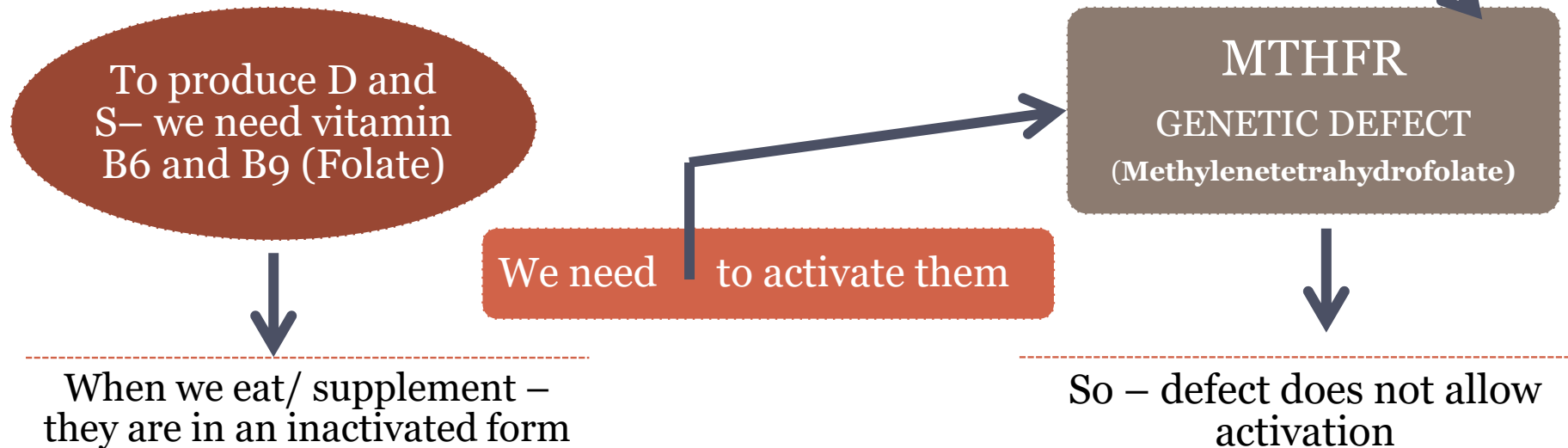
Chemical differences

Neurons communicate with one another using neurotransmitters – Dopamine and Serotonin

Neurotransmitter – chemical messengers that carry information to and from nerve cells



ADHD - Dopamine and Serotonin deficiency – Why?



Impact of ADHD on School Performance



Poor classroom behaviour



Poor academic achievement



Special education requirements
(tutoring and special educational
programmes)

School exclusion
Repetition of grades
Failure to gain
external
qualifications

Low self-esteem
Social clumsiness
Inflexibility
Defiant behaviour

Association between symptoms of
inattentiveness (as measured by the
Conners 10-item scale) in children aged 7
and 10 years and academic
underachievement at age 16 years (APA,
2013)

Adolescents and adults
with ADHD have been
found to be **less likely
to have achieved a
further education
degree** (Davis, Claudius,
Palinkas, et al. 2012)

Executive function



Executive function is a set of mental skills that help you get things done.

These skills are controlled by the frontal lobe.



Executive dysfunction

This stems from an inability to inhibit present behaviour so that demands for the future can be met (Barkley, 2000)

Executive functions

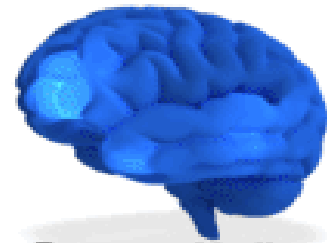
- Snake bite – no plan...
- Stepped on = bite back



Humans
fortunately
have the
option to
modulate
behaviour

Frontal and pre-frontal
lobes play a large role in
this **self control and
planning**.

Where we came from, where
we want to go, and how to
flexibly control ourselves
in order to actually execute
the plan = EF



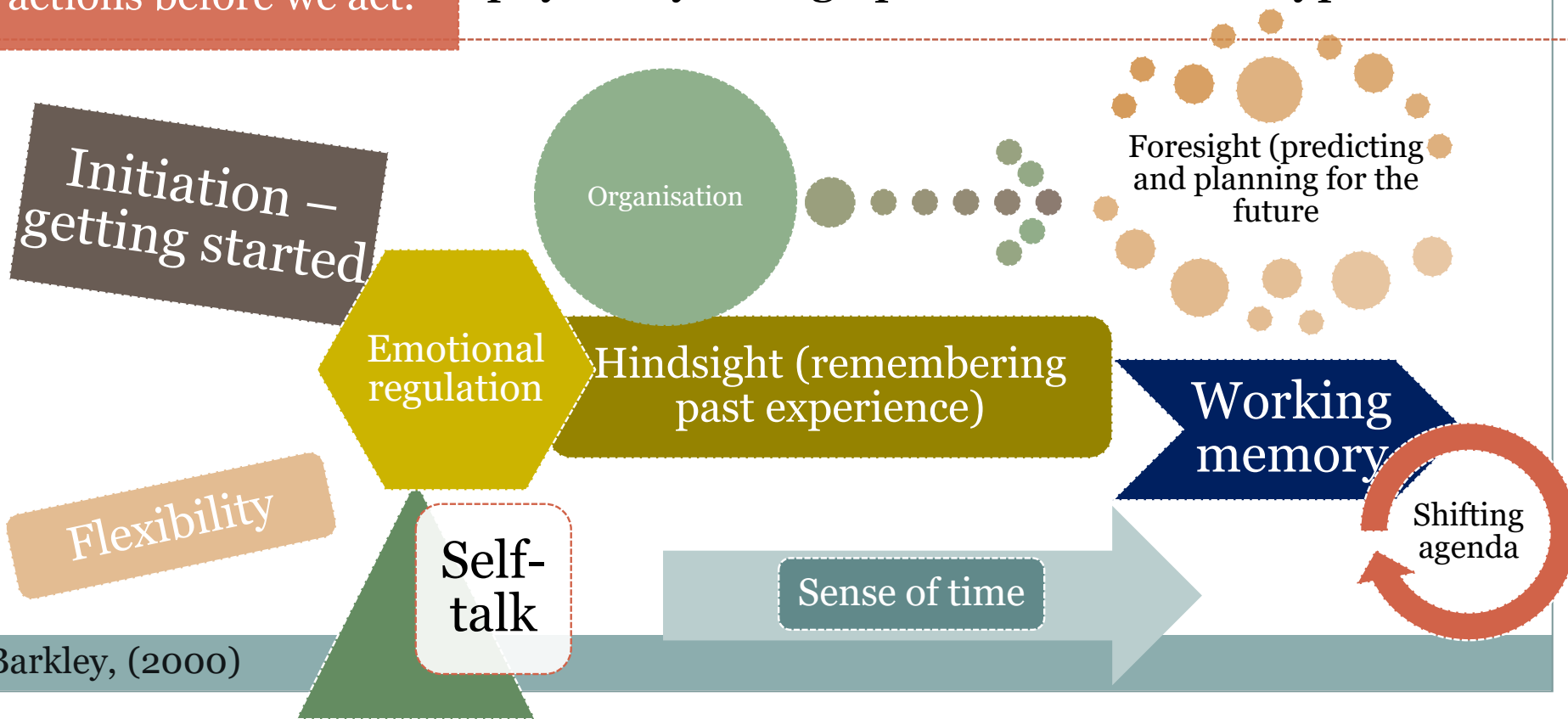
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Executive dysfunction



Inhibition - putting brakes on your behaviour – to plan involves putting on the brakes on distracting activities – allows us to stop and think to consider our actions before we act.

Without these brakes – unable to inhibit distractions (inattentive), unable to inhibit instant reactions (impulsive), or unable to inhibit physically acting upon these stimuli (hyperactive).



How does a child with ADHD feel?

Those who have ADHD explain that they get lots of different thoughts at the same time. It's confusing and they are always in trouble with someone. They feel unpopular and know that sometimes they are difficult to like.

Adults are always annoyed because you've forgotten something or done something silly. They spend ages telling you off and making you feel stupid.

You seem to get the blame for everything. It's miserable and unfair

"I get picked on every day. I just get treated weird, like an alien."



If you had some type of physical disability that people could see, they'd understand, but as they can't see that your brain isn't receiving a perfect signal, you don't get any sympathy at all.

How does the teacher feel about having children with ADHD in their classroom?

I'm spending most of the class time every single day with one student; it's just not fair on the others.

Frustrated when they are constantly fidgeting, jumping up from their seat, interrupting and disrupting the whole class.

I need ADHD training to help improve classroom behavioural strategies

They never do the work I set them. This holds back others in the classroom

Children with ADHD are just plain naughty!

I don't understand enough about ADHD



TASK - Reframing those frustrations



- Think of the student who is easily distracted as...
- Think of the restless student as...
- When the student with ADHD goes off on a tangent...
- If the student forgets things, consider that...
- If the student starts interrupting, think of it as...
- When work is sloppy, look for signs of...
- Look on a student's apparent selfishness as...
- Try to reward good development and ignore...

Reframing those frustrations

Think of the student who is easily distracted as having high levels of awareness and observation



Think of the restless student as being energetic and lively



When the student with ADHD goes off at a tangent, see it as a sign of individualism and independence



If the student forgets things, consider that they've been absorbed in their own thoughts



If the student starts interrupting, think of it as enthusiasm to contribute



When work is sloppy, look for signs of effort despite difficulties



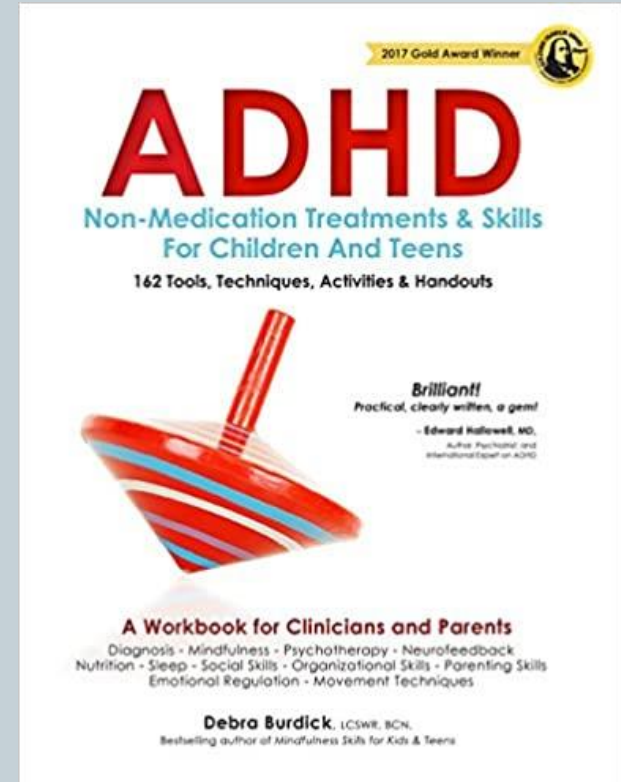
Look on a student's apparent selfishness as single-mindedness in pursuit of goals



Try to reward good development and ignore the development that you don't want

Easy tasks to help children with ADHD

- Species of Automatic negative thoughts (pages 58-59)
- Mindfulness of inattention for ADHD (pages 114-136)
- Dots concentration game (page 121)
- Get the sleep you need (pages 198- 203)



<https://www.amazon.co.uk/ADHD-Non-Medication-Treatments-Clinicians-Techniques/dp/1559570334>

Promote positive behaviour

Table/Team competition: points are awarded to any table/team demonstrating the target behaviour(s): “Table four, good job of cooperating and helping your teammates. You just earned a point”. At the end of the day/week, the table/team which had the most points earns the reward or privilege.



Anger management

Marble/Straw Breathing: You will need a straw and a marble for each person playing. Have the child blow the marble from one point to another (across a table or across the room). Focusing their breath through the straw helps to reset their breathing patterns and calms them down.



Encourage turn-taking



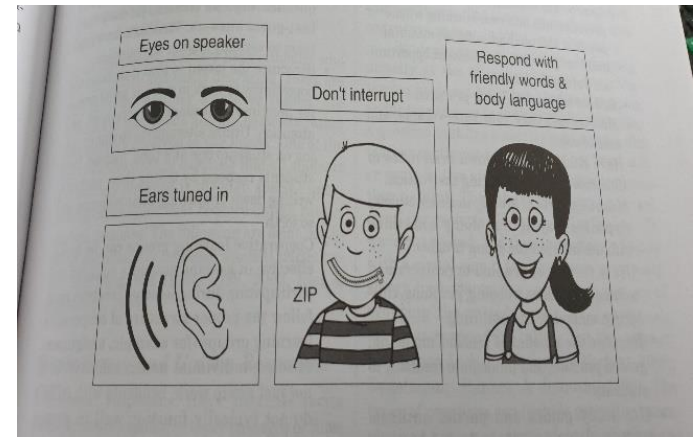
Feely bag Equipment: Bag, range of objects that are not too obvious in shape (e.g. fir cone, brush, remote control etc). Children sit in a semi-circle in front of you. One object is placed into the bag without the children seeing it. The bag is passed round the circle, with each child having a feel. Encourage the children to think in their heads of what they think the object is but to remain quiet until everyone has had a feel in the bag. When the bag has gone round the circle, you say ‘hands up anyone who thinks they know what was in the bag.’ One child is then chosen to make a guess, and guessing continues until someone guesses correctly.

Encourage self-regulation

Start with everyone along the starting line, When you say 'Green Light' everyone will move towards the finish line, When you say 'Red Light' everyone must immediately stop. If players are still moving when you call 'Red Light', they must go back to the starting line.



Encouraging good listening



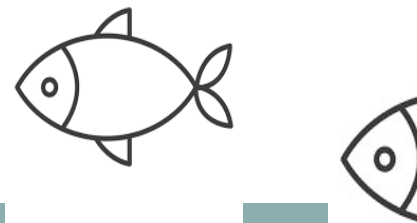
Improve body language and verbal cues

While watching a video in class, pause at certain points to ask how characters are feeling based on how they look. Have the class close their eyes. Play part of the video, and ask pupils to guess what the character is feeling based on inflection, pitch and tone.



Improve memory

Complete the picture – show the pupils a simple picture and then give them an incomplete drawing of the same picture. Ask them to complete the picture from memory



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Relevant Publications



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