

Achieving Kids



Foundations for Lifelong Success: Enhancing Executive Functioning Skills

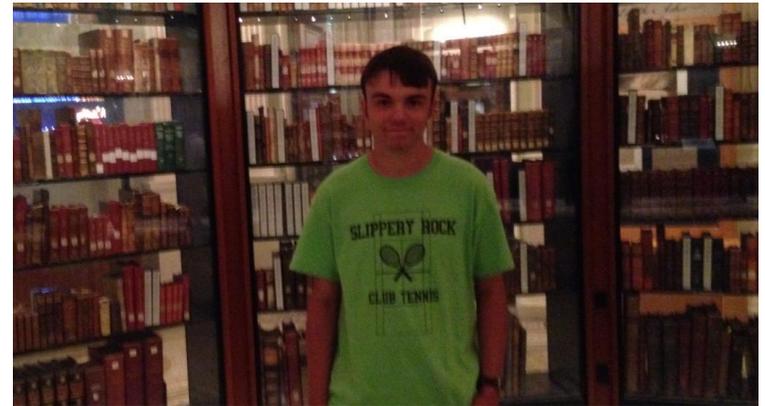
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A day in the life.....



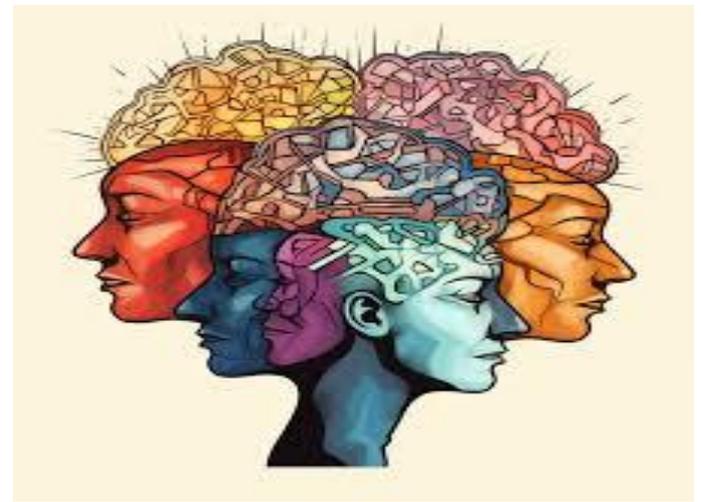
When he was 17, I took Matt to Washington DC to view an exhibition of Thomas Jefferson's books. He spent two and a half hours happily commenting upon and recounting Jefferson's views on westward expansion, politics, religion, and philosophy.

When we returned to the hotel:

- * uh oh ...where's my phone?
- * why do you keep moving my toothbrush?
- * oh here's that scholarship application!

He refused to eat his burger because ketchup had once touched it.

Welcome!



1. Executive Functions: How can they be considered lifelong learning skills?

2. Encouraging the Development of Executive Functioning/Lifelong Learning Skills

3. Neuroplasticity: How we retrain our brains

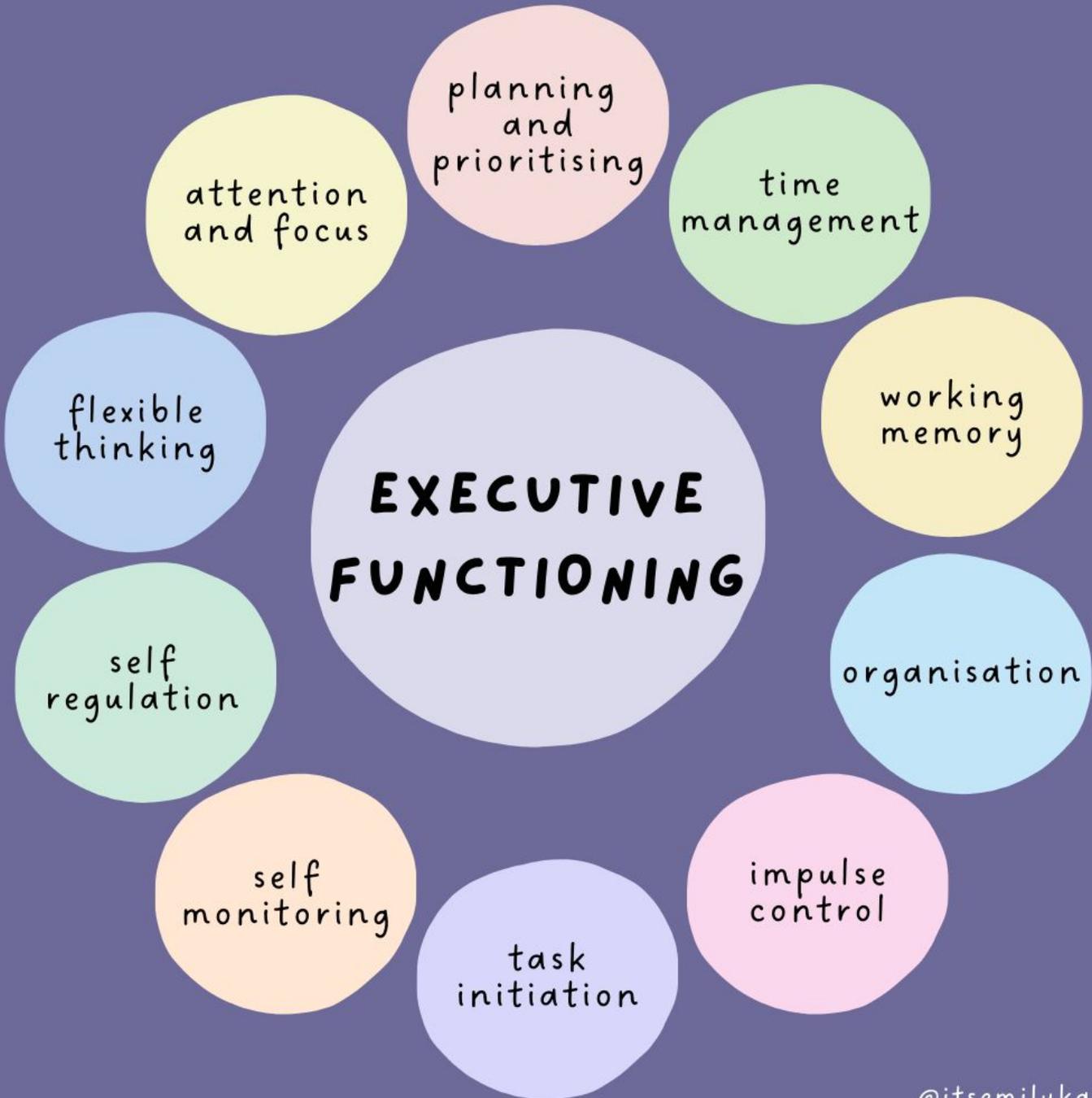
1. Executive Functions - What Are They?

An executive function is ‘a neuropsychological concept referring to the cognitive processes required to plan and direct activities, including task initiation and follow through, working memory, sustained attention, performance monitoring, inhibition of impulses, and goal-directed persistence.’ (*Dawson & Guare, 2004, p. vii*)

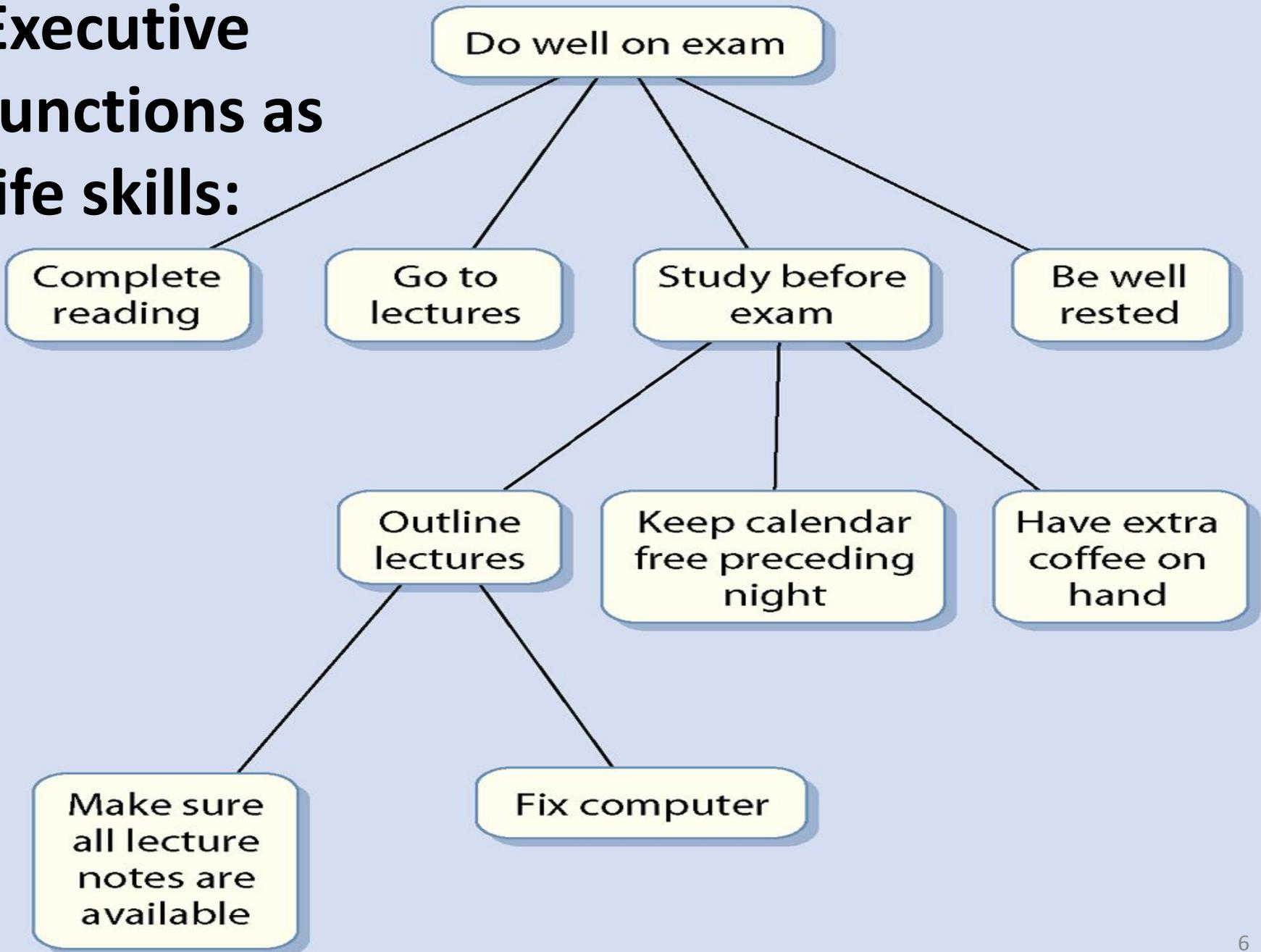
Executive Functions are the conductor to the brain’s orchestra.

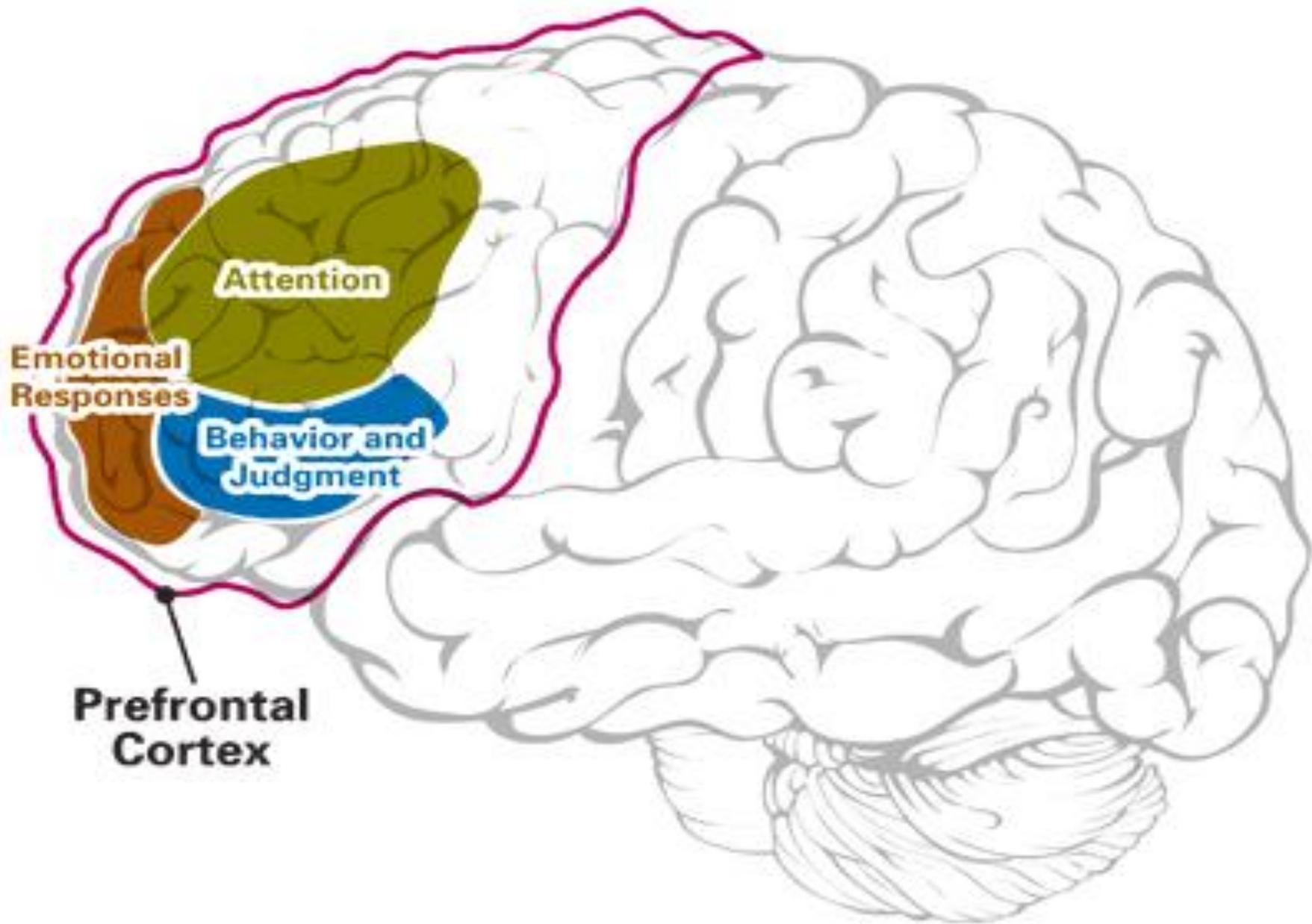
Without them, all you get is noise.





Executive functions as life skills:





2. Encouraging the Development of Executive Functioning Skills

1. Regulation of Emotions

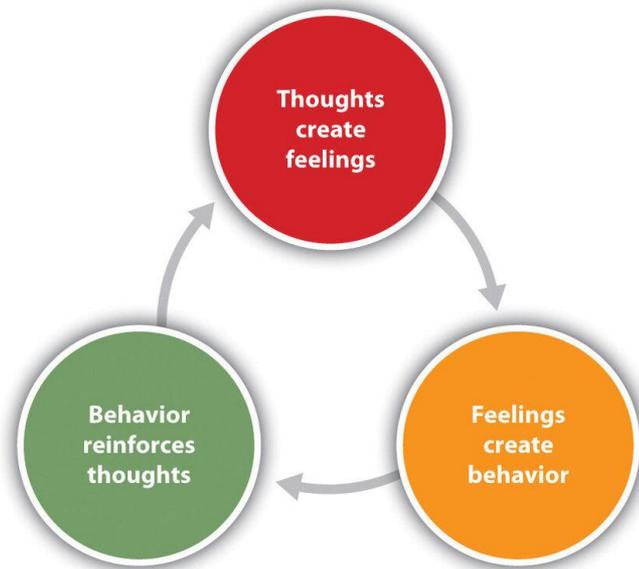
Emotional dysregulation inhibits executive functioning

- When we perceive intense stress, anxiety, or fear our brain chemistry changes. We enter 'survival brain' mode, commonly referred to as Fight, Flight, or Freeze state.
- When in Fight, Flight, or Freeze state:
 - memories are not encoded effectively
 - rigid thinking prevails
 - impulse control compromised
 - decisions are made based on emotions rather than reason.
- Our brains do not distinguish between being in real danger and what we call 'everyday stress'
 - or between a tiger ready to eat you and a hard math test.
- Individuals with executive functioning deficits live in a perpetual state of stress response and need to be taught how to mediate that response.



Emotional regulation begins with:

self-awareness: understanding your feelings and being able to adjust them in order to move you towards your goals rather than away from them.



When we are self aware, we understand that is not the situation which determines our feelings, and subsequent actions, but our thoughts on that situation.

Strengthening Emotional Regulation

3 C's of Cognitive Behavioral Therapy

1. **Catch It**- Helping children to recognize, identify, and label their feelings helps take away some of that feeling's power. 'Name It To Tame It'
2. **Check It**- Help your child understand that just because they think and feel something, doesn't make it real or helpful. Ask them for evidence that the thought might be real. "How does someone act when they hate someone? Has she acted in any of those ways?"
3. **Change It** - Reframe thoughts to be more realistic and helpful. Encourage flexible thinking. "Is there another way you could think about this ?" "How do you think --- was feeling?" "How do you know?" When you change the thought, you change the behavior.

Encourage toleration of feelings - Just because you feel this way now, doesn't mean you'll feel this way in 10 min/tomorrow. In sessions, we teach how to observe a thought without responding.

Calm Down Strategies



Once an individual is self aware enough to identify whether or not their thoughts and feelings are realistic, or helpful, they're able to employ calm down strategies. Deep breathing, mindfulness, and yoga help lower stress, so we're able access the Prefrontal Cortex and change our thoughts and feelings to be more helpful.

Deep Breathing helps lower anxiety by:

1. Shifting focus away from the intense emotion and towards the act of counting, a visual image, and the sensations of how breathing in and out.
2. Changing the chemical composition of the brain. Deep, long, slow breaths signal to the brain that the danger has passed.

Lowering stress activates Prefrontal Cortex and enables Executive Functioning.

2. Organization



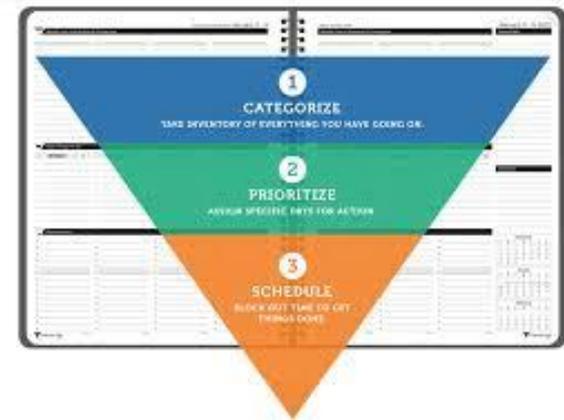
- This is “the ability to arrange or place things according to a system” (Dawson & Guare, p. 58).
- Due to constantly shifting focus and thoughts, individuals with EF challenges tend to leave materials in random places or have great difficulty organizing their thoughts in speech and in writing.
- Disorganization is the physical manifestation of mental disorganization.

Routines that incorporate organization of materials, encourage organization of thought.

Strengthening Organizational Skills

1. Work with your child to set up the organizational systems.
2. Create spaces with clear expectations: room, backpack - put something away ONE time.
3. Explicitly teach how to complete an agenda book or make a calendar.
4. Teach how to break up complex tasks and prioritize.
5. Work together to make a schedule/checklist and visually display them. Use lamination to increase interaction and self monitoring.
6. When scheduling tasks, incorporate rewards and make enjoyable tasks conditional upon completion of responsibilities.

3. Planning & Prioritizing



- This is “the ability to create a roadmap to reach a goal or to complete a task. It also involves being able to make decisions about what’s important to focus on and what’s not important” (Dawson & Guare, p. 55).
- Individuals with EF challenges are often unable to break down complex tasks into smaller more manageable pieces or prioritize tasks.

Teaching How to Plan & Prioritize

Show your child how to do a brain dump: Make a list of everything that needs to get done.

Help them understand the difference between urgent and important: Based on deadlines, work backwards to order tasks.

Incorporate time management skills. While planning, ask your child to estimate how long they think each task will take. Once the task is completed, compare these estimates to the time it actually took. When tasks take longer than expected, review the reasons why to help create an awareness of time. Were they taking many breaks? What were the distractions? Which strategies helped?

Put the items into a sequence: Start with urgent tasks followed by the important ones. Work backwards from deadlines and put each step on the planner.

Break tasks down: Remember that procrastination can be a sign of overwhelm. Make steps specific enough that they make goals more achievable.

Incorporate breaks: Incorporate body and brain breaks. Use Post-it notes to remind them what they were doing so they can ease back into it.

4. Time Management



- This is “the capacity to estimate, allocate, and execute within time constraints” (Dawson & Guare, p. 60).
- ‘Time Blindness’ refers to an inability to sense the passing of time and is common in Executive Functioning impaired individuals.
- [Timeblindness on Tiktok](#)

Strengthening Time Management Skills

- 1. Set routines** - Focus on systems to create habits rather than reminders. Routines take pressure off working memory, impulse control, time management skills.
- 2. Make time external** - Help your child visually see the passage of time. Use 'egg timers' or other ADHD timers which show time passing.
- 3. Present variety of time management tools - such as types of homework agendas** - Discuss pros and cons of each, but let them choose the tools. Be prepared to review and reevaluate.
- 4. Organize work spaces to lessen distractions**
- 5. Allow natural consequences, both positive and negative.**
- 7. Teach time estimation skills** - ask your child to estimate time needed for tasks and compare real time outcomes. Evaluate strategies that worked - and those that did not.

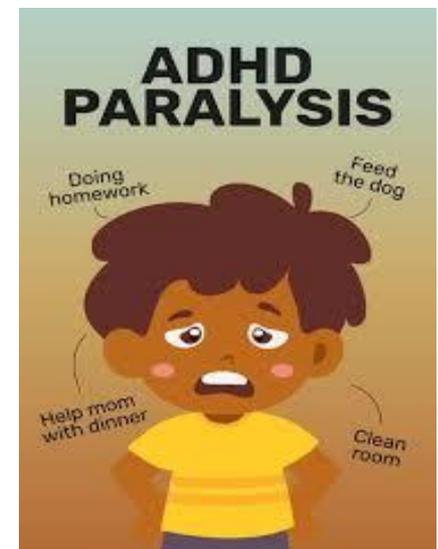
5. Task Initiation

ADHD paralysis is deeper than your usual procrastination. It's the feeling of being stuck in life, unable to begin tasks or prioritize.

[ADHD Task Paralysis Tiktok](#)

Triggers for task paralysis include: fear of failure, perfectionism, overstimulation, and emotional dysregulation.

When individuals feel unable to reach any goal they set for themselves, this can spiral into more serious mental health concerns if not addressed.



Developing Task Initiation Skills

- **Manage emotions**
 - **Clarify goals - ambiguity is toxic to ADHD**
- **Break task down into small, achievable steps**

Then add:

1. Movement

Any movement (even flapping your hands around for a minute or dancing in your seat) can help shift us out of our brain's freeze response.

- Movement generally increases dopamine levels and lowers stress.
- It can also signal to our brains that we're moving out of a freeze state; these freeze states are often a stress response intended to protect us from danger. Movement can signal our brains that the threat is no longer present.

2. Music

When we listen to music that we enjoy, researchers have found that we release the 'feel-good' hormones and neurotransmitters, including dopamine. Music can also encourage movement, which we know is important for moving out of a freeze state.

Developing Task Initiation Skills

3. Protein

- Protein increases dopamine levels. It's important to remember that food is fuel, so if we're running low on fuel, we can't expect to get much done.
- One specific amino acid, or building block for protein, is tyrosine which is crucial for dopamine production.

4. Sunlight

- Consider taking a quick walk around the block to get a little sunshine and vitamin D.
- Sun exposure is important for regulating our neurotransmitters, including dopamine. One study of 68 healthy adults found that those with the greatest amount of sun exposure had the highest levels of dopamine.

Developing Task Initiation Skills

5. Novelty and Meaningfulness

- ADHD brains run on an '*Interest Based Learning System*'. The interest-based nervous system is motivated by novelty, urgency, challenge, or interest. It is difficult for a task which does not have one of these motivators to be completed.
- Brains release more dopamine in contexts perceived as new and meaningful. It's up to ADHD individuals to find ways to trick their brains into seeing a task as new and meaningful. They can change their thoughts to reflect positive, self-advocating reasons, attach specific and achievable rewards to tasks that help them get started.

6. Impulse Control



- In medical diagnoses such as ADHD, a low number of dopamine receptors prevents individuals from making intuitive connections between their actions and consequences.
- When impulses happen, they're stronger than in neurotypical brains and occur in a brain with a weakened impulse control mechanism.

Strengthening Impulse Control

- **Encourage emotional regulation.** An individual in fight, flight, or freeze mode is going to act upon emotions rather than rational judgement.
- **Consequences should be logical and immediate. Avoid power struggles by connecting the behavior to the consequence.** Emphasize that the behavior and its consequence were a choice. Delayed consequences may prevent a child from understanding their relationship to the misbehavior.
- **Be specific, stating clear, consistent expectations.** Telling a child to “be good” is too vague to address behavioral problems. Instead, be explicit: “When we go into the store, do not touch. Look with your eyes.” “When it is not your turn, stand still and wait with your hands by your side.”
- **Be proactive.** When possible, foresee challenging situations and give clear expectations and consequences as choices beforehand.
- **Pick your battles.** Let minor misbehaviors slide.

7. Inattention

Defined as is “the capacity to maintain attention to a situation or task in spite of distractibility, fatigue, or boredom”

(Dawson & Guare, p. 52)

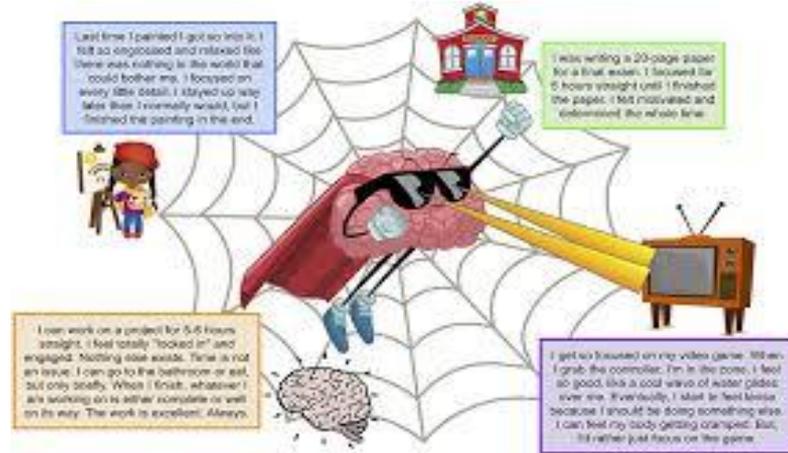


What inattention can look like:

- failure to pay attention to details
- careless mistakes
- difficulty listening when spoken to
- inability to finish tasks or follow instructions,
- trouble organizing activities
- avoidance of things that require long periods of mental effort
- saying “I’m bored” - can mean that they have no idea how to be successful and have gone into ‘shut down’.

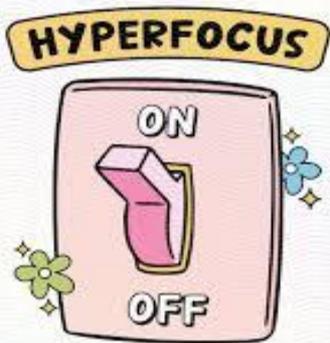
ADHD Hyperfocus - the Superpower!

Hyperfocus refers to *an intense fixation on an interest or activity for an extended period of time.*



People who experience hyperfocus often become so engrossed that they block out the world around them.

ADDitude, Hyperfocus and the ADHD Brain: Intense Fixation with ADD, Aug 25, 2023

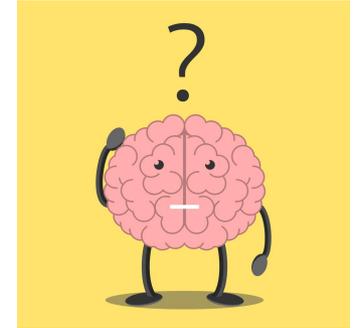


Encouraging Hyperfocus:

- Break tasks into specific, achievable goals
- Make goals meaningful
- Create environment conducive to focus
- Regular physical exercise
- Healthy diet choices
- Sufficient sleep
- Mindfulness and meditation
- Reduce excessive stimuli

8. Working Memory

- Working Memory is “the ability to hold on to information while performing complex tasks.” (Dawson & Guare, p. 49)
- Activation of the stress response significantly compromises working memory.
- It is essentially the movement of knowledge from short term to long term memory.
- When an individual’s focus is constantly shifting, new information does not connect to prior knowledge and information cannot pass from short term memory into long term memory. Information is lost.
- Deficits can look like: poor reading comprehension, lost or forgotten homework and materials, trouble recollecting interactions, inability to understand directions - verbal and written.
- An effective working memory is critical for learning.



Strengthening Working Memory Skills

- **Lower anxiety** - recall that heightened stress leads to faulty encoding of memories and an inability to connect prior knowledge to new learning.
- **Make connections** - whenever your child makes a connection, they are strengthening their working memory. Encourage visualization of concepts, comparing and contrasting, and making predictions based on previous understandings.
- **Use memory tricks**- connect new learning to: movement, use rhymes, visualization of images, and utilize mnemonic techniques.
- **Routines** - take the load off the working memory by establishing routines or habits.

9. Sustained, Goal Directed Motivation

Types of Motivation: Intrinsic and Extrinsic

Intrinsic vs extrinsic motivation

Intrinsic motivation is the internal drive to perform a task for its own personal rewards rather than for the promise of something external. An intrinsically motivated individual is moved to act because of the excitement or challenge a task presents, rather than because of external pressures or rewards.

Extrinsic motivation happens when an individual performs a task, or refrains from doing something, because of the expectation of reward or punishments from an external source.

Dopamine release is triggered by intrinsic motivation, but not extrinsic.

Building Intrinsic Motivation

**Intrinsic motivation comes when individuals feel:
Autonomy, Competence, Purpose**

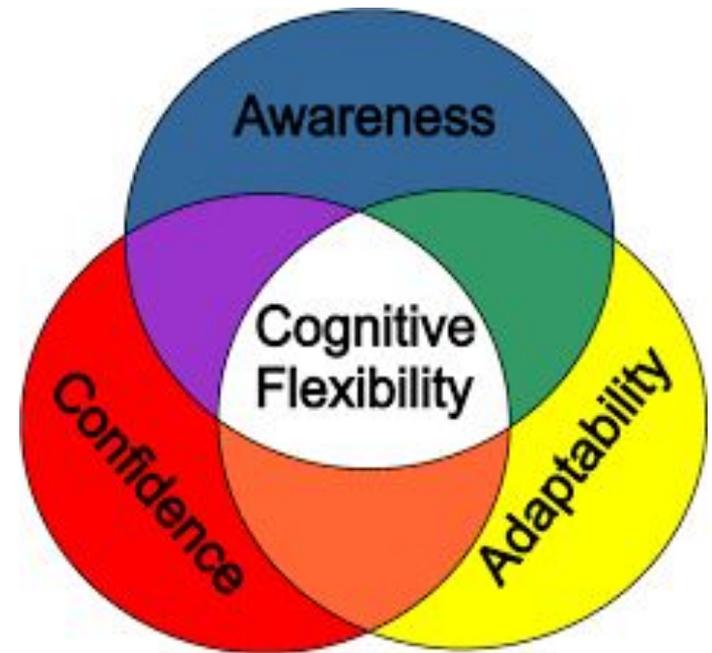
Autonomy – The task is one that the individual has chosen to do. Completing the task represents a sense of independence, or a chance to achieve an important goal they set for themselves.

Competence – Understanding exactly what to do and how to do it.

Purpose – Completing the task will have a genuine impact, and contribute significantly to being successful.

10. Cognitive Flexibility

The ability to adapt to new and unexpected conditions and see situations from another's perspective.



- Neurobiological factors can cause individuals with EF challenges to experience rigid thinking, or cognitive inflexibility. 'All or nothing' or 'black and white' thinking patterns are common.
- Other weaknesses in Executive Functioning, such as weak working memory, impulsivity, and emotional dysregulation can make flexible thinking more difficult.

Developing Cognitive Flexibility

- **Manage strong feelings** - Once in 'survival brain' mode, an individual is incapable of viewing situations from a variety of perspectives. Emotions will take over and their intensity will dictate the perspective.
- **Approach problems with curiosity rather than emotional judgement.** Encourage your child to calm down and brainstorm other ways you could view the situation.
- **Model flexible thinking styles.** Remain open-minded and ask questions which increase understanding rather than form judgements.
- **Focus on areas of the problem/situation which are within your control.** Help your child identify what is within their control, and brainstorm solutions which focus only on those aspects.
- **Encourage perspective taking.** Ask your child to describe situations and problems from a variety of points of view.

3. The ability to overcome challenges and learn the life skills we've talked about today is built upon the concept of **Neuroplasticity.**



Neuroplasticity is defined as the ability of the nervous system to change its activity in response to stimuli by reorganizing its structure, functions, or connections.

*Neuroplasticity - StatPearls - NCBI Bookshelf
National Institutes of Health (NIH) (.gov)*

[Neuroplasticity](#)

