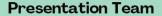
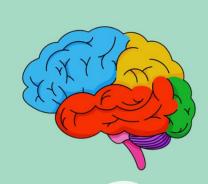
## EXECUTIVE FUNCTIONING SKILLS

What to Expect and How to Support High School Students May 20, 2024



Solange Caovan-Hornbake - School Psychologist Frida Krachenfels - Student Support Coordinator Lori Ockerman - School Psychologist Kelly Pendleton - School Psychologist



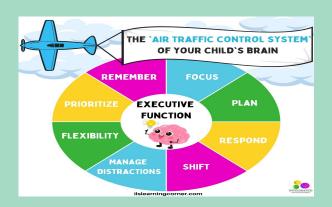
# CHILDREN DO WELL WHEN THEY CAN.

DR. ROSS GREENE (CLINICAL CHILD PSYCHOLOGIST)

### WHAT IS EXECUTIVE FUNCTIONING?

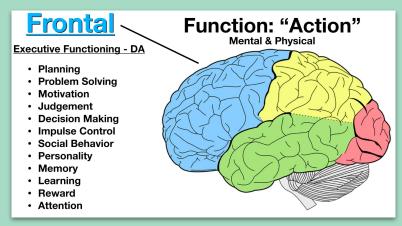
Think about an air traffic control system but in the brain. It's a set of cognitive processes that are necessary for self-control.

People use executive functioning to perform activities like planning, organizing, strategizing, paying attention to and remembering details and managing time and space.



### GENERAL TIPS

- It's important NOT to become a "surrogate" frontal lobe for your child
- Avoid the assumption your child has the EF skills required and just aren't motivated to use them.
- Effort is important and plays a role in demonstrating EF, however, some behaviors reflect a skill weakness not a lack of motivation.
- We may have to directly teach some of these skills. Something that gets complicated as our kids get older (and dislike parents telling them what to do)!



https://www.ezmedlearning.com/blog/cerebral-cortex-lobe-anatomy

- Have your shared goal of independence.
  - Examples: work together to help your teen get a driver's license, find a job, buy a car, book a hotel room for the family on vacation.
- Consider your teen's developmental level and capacity when setting goals.
- Don't expect too much of them!

### HIGH SCHOOL EXPECTATIONS

Planning and organization are organization are increasingly important at this age.

#### **Example of Skills:**

Finding jobs, selecting courses in school, meeting deadlines, college applications

- Writing To-Do Lists
- Using planners or other organizational tools

Independently plan and organize for long-term tasks and activities

- writing a paper that is due in two weeks
- reading a number of chapters in a book to be finished by a deadline.

An increase in awareness of and ability to manage their schedules and activities.



## PLANNING SKILLS TIPS

#### Compromise!



Help your teen monitor how their behaviors towards their their progress towards their goals.

You may ask: "is this part of you may ask: "is this part of the plan?", "Why am I doing the plan?", "Has my goal something? "Has my goal changed?"

- Negotiate/Compromise
- Let your teen decide on goals
- Help your teen develop short term plans to reach their goals
- Use apps, a planner, or calendar to keep track of obligations
- Lead your teen through the process by asking questions rather than telling them what to do. If they can't think of suggestions, offer choices to help them remain active in the planning process.

## TIME MANAGEMENT: It's an art!

The ability to understand how long a task will take and then distribute the appropriate amount of time to complete it.

- First learned through breaking down time into seasons, months, days, etc.
- By adulthood, can use tools and techniques to manage time.
- Example: setting aside appropriate time to work on a task or activity without compromising the time needed for other tasks or activities.

You may ask: "How long will this take? If this is due on Tuesday and today is Friday... then I have 7 days to complete it! Next steps: let me get a calendar and plan it out!!



## ORGANIZATION

Keeping a tidy space helps to be able to finish tasks efficiently.





#### **Examples:**

- Keeping track of assignments and needed materials.
- Knowing location of needed materials.
- Setting your bookbag up the night before.

Filing papers/materials so they are easily found and retrieved at a later date.



## TIME MANAGEMENT & ORGANIZATION TIPS

#### LINKS

Executive Functioning Toolkit that Works

Alexa Skills for Therapy

- If your teen struggles with Canvas, consider making a spreadsheet with your child to keep track of assignments
  - Try to instill time awareness:

    Predict how long something will
    take (chore, walking to the store,
    take (chore, then perform the
    assignment, etc) then perform the
    task and check accuracy.

- Temper your expectations!
- Use apps to stay organized.
- Set up calendar reminders on a phone or smartwatch
- Model simple organizational schemes for your child.
- Talk through strategies (as tolerated!) when teaching a new skill

#### **Task Initiation**



- The ability to generate ideas and start tasks.
- The ability to work for longer periods of time grows with age.
- Example: Planning out an essay and organizing thoughts in order to begin writing the essay.

Tips: reward task completion (not grades), consider a "brain dump" when feeling stuck, avoid perfectionism, mindfulness strategies, reward hard work on a non-preferred task with a preferred activity

#### Flexibility/Shift

- The ability to cope with and adjust to changes, obstacles, setbacks.
- Changing course or re-adjusting their approach to a task as needed or as they gain additional or new information

**Example:** Receiving feedback from the teacher and making adjustments to an assignment.

#### Tips:

- Give advance notice (when possible!)
- Practice handling unfamiliar situations
- Help your teen anticipate challenges
- Make a list of coping strategies
- Monitor your "maybes" and "no's"
- Teach when we need to be flexible
- Reward flexibility
- Monitor your own emotions!



#### **Working Memory**

- The ability to keep information in conscious awareness while completing tasks.
- Development of working memory peaks in young adulthood.
- Working memory capacity and cognitive flexibility increase.

Tips: Make eye contact with your teen before telling them something you want them to remember, avoid competing distractions, have teen paraphrase, consider timing, use written reminders (or texts)

#### Impulse Control/Inhibition

- Important because it enables the other EF skills to develop. If your child lacks response inhibition, start with building up skills in this area before moving on to other EF skills.
- Being able to inhibit impulses and use more rational problem solving.
- Towards the end of this stage, teens may engage in less risky behavior because they begin to appreciate the "big picture."

impulse to follow along with peer pressure in order to do what is needed—not skipping class so as not to miss instruction.



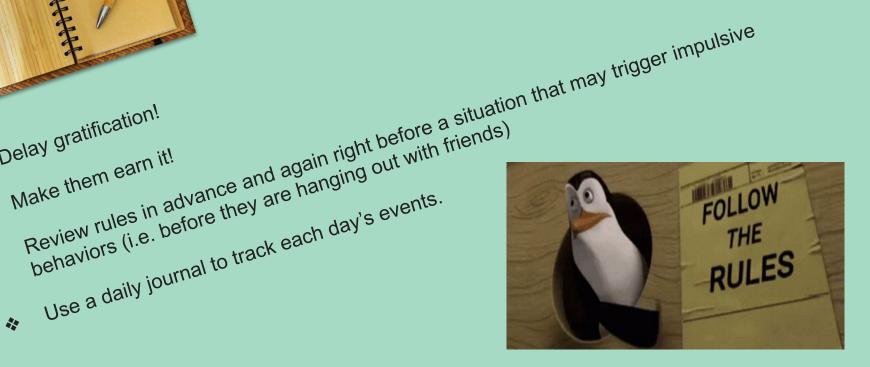
## TIPS FOR RESPONSE INHIBITION

Delay gratification!

\*

Make them earn it!

Review rules in advance and again night behaviors (i.e. before they are hanging out with friends) Use a daily journal to track each day's events.



## **Attentional Control**

- The ability to regulate attention and focus increases with age
- Being able to focus for long enough to complete a task
- Can be impacted by neurodevelopmental conditions such as autism or ADHD

#### **Tips**

- Identify difficult tasks
- Break tasks down into smaller parts
- Provide supervision (if your teen agrees!)
- Timers
- Use apps on watches/devices to cue back to task
- Link tasks to interests or strengths
- Consider incentives
- Praise for staying on task
- Build healthy lifestyle habits (diet and exercise!)

#### **Self-Monitoring**

- Being able to monitor one's own behavior in order to make necessary changes in the future.
- Behaving in a manner that indicates learning from past experience(s).

**Tips:** Journaling, keeping checklists, and mindfulness techniques can help with self-monitoring. Model and encourage self-talk.



## EXECUTIVE FUNCTIONING BY AGE LINK

	PLANNING	TIME MANAGEMENT	TASK INITIATION	ORGANIZATION	PROBLEM SOLVING	FLEXIBILITY	WORKING MEMORY	EMOTIONAL CONTROL	IMPULSE CONTROL	ATTENTIONAL CONTROL	SELF MONITORING
INFANT (0-24 MONTHS)	focusing for objects     pointing & grabbing			shows interest in color, size, shapes     beginning matching skills	engages in cause and effect play in figuring out 'how things work' through simple body movements and basic play skills	Older children in this age range play simple role play or imaginative play games	plays hide-and- seek and simple recall games     participates and enjoys familiar rhymes and songs			plays simple games like peek- a-boo and pat-a- cake     imitation and copying behaviors emerge	
TODDLER (2-4 YEARS)	understands simple instructions and can run simple errands	beginning understanding of understanding of including seasons, days, weeks, etc.     follows visual picture schedules to order tasks.     practices walting.	able to independently start and complete tasks that take up to 10 minutes	understands categories and patterns     can sort toys and objects by function, form, cleans up toys and belongings with adult assistance	- completes simple puzzles and gas that combine language and movement to accomplish a goals of turn-taking during play promote basic problem solving	Beginning skills to shift between activities.     Sometimes able to manage to manage unexpected changes without upset.	follows along to songs and fingerplays with many steps and movements.	labels own emotions and the emotions of     may often have tantrums or upset when frustrated, tired, or overwhelmed requiring adult comfort to soothe.	plays active inhibition games like musical chairs, and freeze dance     learns o inhibit servelated behaviors like touching a hot stove and street safety.	able to direct attention to objects and activities for longer periods of lime.      adult open and redirections back to 'pay attention' when needed.	talks about own feelings and connects simple behaviors with emotions.     plays along with other children, directing play as accepting play ideas.
EARLY LEARNER 5-12 YEARS	able to follow a planned out set of steps to meet an end goal.     plays fast moving games and games requiring strategy and planning ahead.	developing time estimation and a sense of how long tasks will take.     beginning skills to manage leisure time and required tasks.	able to independently start and complete tasks that take up to 30-60 minutes	organize and sequence stories can follow simple checklists     gathers materials for familiar routines, often with adult assistance and reminders	identifies and defines problems to many simple social and academic tasks;     emerging skills to brainstorm and break apart problems to identify solutions.	Participates in organized social activities like sports, clubs, and activities where unpredictable events occur. Often uses adult support to dynamically adjust.	Independent with puzzles, logic games, and coordinated group activities.     able to collect information and apply it to new settings.	learns to control tantrums and frustrations without adult comfort.	follows safety rules and most social norms for behavior.     behavior maintains when teachers or adults are not around.	able to save money for desired objects.     developing note taking, reminders, and planning tools to help sustain attentional control.	able to complete activities like journaling to reflect on own behavior, checks own worfor simple mistakes.
TEEN 13-18	able to independently plan out the steps of homework or important project to meet an end goal.     Works in a group of peers to plan social activities and events.	estimates how long it takes to complete tasks and adjusts working speed to fit. understands and works to avoid the consequences of ineffective time management.	able to independently start tasks that take up to 60-90 minutes to complete	follows complex school schedules combined with home routines.     aystems for organizing schoolwork and activities.	independently identifies problem ork, and with friends,     able to sort out many conflicts and make decisions about complex problems independently, make seek adult guidance.	Able to manage many unpredictable changes to schedules and sometimes need adult support to identify strategies to dynamically adjust.	able to collect information and apply it to new settings.     independent with puzzles, logic games, and coordinated group activities	greater understanding of others emotions, including empathy and a desire for social and a desired fo	greater risk- taking behaviors     may begin to test     some adult safety     social norms     may engage in     self-talk to help     manage impulses	able to save money for desired objects and executes and executes plans to earn money for desired items.     Beginning mindfulness of distractions, but may need adult support to avoid them.	able to monitor performance ar adjust/improve.     Uses tools to monitor behavi- steedback or ne- reminders from coaches, paren friends, teacher etc.
YOUNG ADULT 18+	able to develop and maintain multiple different plans at one time to meet many different goals     able to establish and meet long- term goals.	seeks out and implements tools and systems to manage time more efficiently     uses routines and modifies schedules dynamically to meet changing demands.	initiates and completes tasks despite adverse conditions and distractions.     prioritizing and planning occurs ahead of beginning most activities	maintains neat and orderly systems for daily living tasks.     when areas of life like email household chores get out of hand, can re-organize as needed.	generates solutions to complex problems.     persists in developing new and creative strategies to ongoing problems.	modifies schedules dynamically to meet changing demands.     Unpredictability causes occasional stress, but able to handle mest changes easily.	greatest working memory capacity in early adulthood.     able to collect, store, and synthesize information from multiple sources to accomplish tasks and goals.	emotional modulation in most settings including controlling outbursts and managing frustration in healthy ways.	manages impulsive behaviors across a variety of settings.     Withholds rushing through things inhibits reckless and dangerous behaviors.	Able to sustain attention in the face of many distractions     Eliminates or reduces distractions when needed	checks work for mistakes.     monitors and compares own behavior to others performance.

Executive age is the child's age based on how his or her brain is working. ADHD children and adults are an average of 30% behind in their executive age. This includes their ability to regulate their emotions, body, impulses, social awareness, and general maturity. It can be even greater than 30% depending on the person. This delay will last into adulthood and effect relationships and careers. Human brains reach their highest point of maturity in the early 30, and for ADHD people, that is where the maturity stops, even if they are delayed.

True Age	Executive Age	True Age	Executive Age	True Age	Executive Age
3	2	13	8.67	23	15.33
4	2.67	14	9.33	24	16
5	3.333	15	10	25	16.67
6	4	16	10.67	26	17.33
7	4.67	17	1.33	27	18
8	5.33	18	12	28	18.67
9	6	19	12.67	29	19.33
Ю	6.67	20	13.33	30	20
- 1	7.33	21	14	31	20.67
12	8	22	14.67	32	2133

When your children frustrate you with actions that are not age appropriate, refer to this chart to remind you to give them grace because their brains are developing behind schedule.

## CHRONOLOGICAL AGE VS. EXECUTIVE FUNCTIONING AGE

True Age chronological age

Age:
where their skills are

Source: <a href="https://ceril.net/index.php/articulos?id=621">https://ceril.net/index.php/articulos?id=621</a>

## EMOTIONAL REGULATION

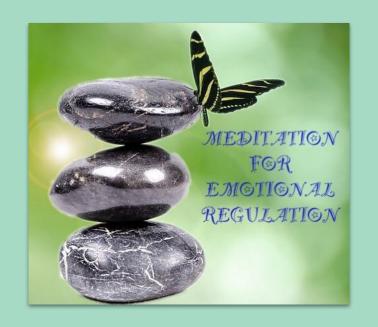
....the ability to effectively manage and regulate one's emotions in response to various situations and stimuli.

Supporting a teenager in regulating their emotions involves creating a safe and open environment for communication.

Encourage them to express their feelings and thoughts without judgment, fostering a sense of trust.

## EXECUTIVE FUNCTIONING & EMOTIONAL REGULATION

Emotional and behavioral regulation are precursors to cognitive regulation.



Develop and nurture adaptive coping strategies to support your child in school and life

(as opposed to maladaptive strategies such as skipping)

The importance of patience and balance.



## ADOLESCENCE IS A MAJOR TRANSITION... PERIOD...

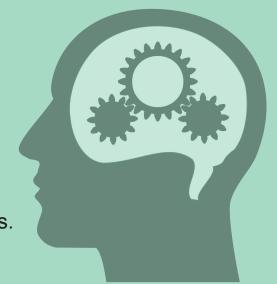
Adolescence coincides with increased social pressures and dramas, intensified academic workload, high stakes tests, more expectations for independence, big decisions and driver's license (insurance)

**W**e know emotions can impact our productivity, decision-making, academic and work performance, concentration, relationships, stamina - and the list goes on!



## THE BRAIN, EXECUTIVE FUNCTIONING (EF) & EMOTIONAL REGULATION (ER)

EF skills direct other cognitive processes toward a goal, by allowing us to direct our emotions, thoughts and actions.



The prefrontal cortex, known for its role in planning, organizing and problem solving, also interacts with the amygdala, a key structure in emotion processing, to modulate responses. Both EF and ER undergo profound changes during adolescence.

In situations requiring emotional control, the prefrontal cortex exerts an inhibitory influence on the primitive part of the brain involved in generating emotional responses.



## THE BRAIN, EF & ER (CONT'D)

- Primitive brain helped us survive, alerting us to danger
- **♦ FIGHT FLIGHT FREEZE**

We don't typically worry about being attacked by an animal, but, in our advanced society, those mechanisms still exist in our brain. Now, in the absence of real threats, our brains register even perceived threats as real - this is

Anxiety / Panic

## THE BRAIN, EMOTIONS & EXECUTIVE FUNCTIONING

#### Coping strategies related to emotional regulation, seek to:

Intensify emotional experience and expression, with the goal of augmenting positive emotions and enhancing well being.

- Moderate / mitigate the intensity of negative emotions, to promote adaptive functioning in emotionally charged situations.
- Empirical research suggests these regulatory processes can be achieved through a variety of cognitive reappraisal techniques, so we can re-interpret information in a less emotionally manner.





## FROM <u>A PARENT'S GUIDE TO EMOTIONAL RESILIENCE</u> BY MARY CAHILLY, MA, LMHC, LPC, CCTP

"Emotional well-being is the presence of positive emotion and mood, and the absence of prolonged negative emotion, along with feelings of satisfaction and fulfillment"

- Humans are wired to experience all different emotions
- Complicated rules about emotional expression
- Cahilly challenges us to think of negative emotions as energy that helps us prepare for what's coming
- She encourages us to recognize our own resilience

## FEELINGS

**Angry** Confused Resentful **Frustrated Axious** Insecure **Fearful** Rejected

**Amused Inspired Joyful** Creative **Satisfied Trusting Excited Grateful** 

**Grief-Stricken** Remorseful Guilty **Disappointed Heart Broken Victimized Disrespected Misunderstood** 



"When we allow ourselves to
experience negative emotions,
our happiness is sweeter, our
joy more fulfilling, our
joy more fulfilling, our
satisfaction lasts longer and we
satisfaction true, authentic
can be our true, authentic
selves" -Mary Cahilly

## RETHINKING OUR THINKING...



- Most people see the middle way as the "path of life" only allowing for positive outcomes
- Think of negative emotions as "rumble strips" on the roadside
- Rumble strips "wake us up" to a need perhaps for more adaptive coping strategies
- Strong emotion limits thinking processes for generating solutions
- GOOD NEWS: We can literally change neural pathways with cognitive techniques

## BEWARE OF THOUGHT DISTORTIONS...

Overgeneralization: "She said, "no", so I'll never have a date"

All-or-nothing thinking: "If I don't get into Harvard, I'll never be successful"

Mental Filter: focus on negative / ignore positive... "We won, but, I fell down!"

Emotional Reasoning: "I feel it, so it must be true" (our feelings are wrong a lot)

"Hold your thoughts lightly stories I tell myself, just how you react think. More "Mary Cahilly" You

Catastrophizing: Expecting the worst case scenario in a situation

Minimizing: Downplaying successes..."I did well on the test because it was easy"

Disqualifying the point: "They were nice because they felt sorry for me"

## TECHNIQUES TO BUILD EMOTIONAL RESILIENCE FROM ETHAN CROSS IN CHATTER

- Zoom out: take a wider perspective "Others have survived this"; "Will I even remember this a year from now?"
- Distanced Self-Talk: What would you say to a friend having this problem?
- Reframining symptoms: See them as alerts to get ready
- \* Establish or revisit familiar comforting rituals Acts that bring calm
- ❖ GET ENOUGH SLEEP



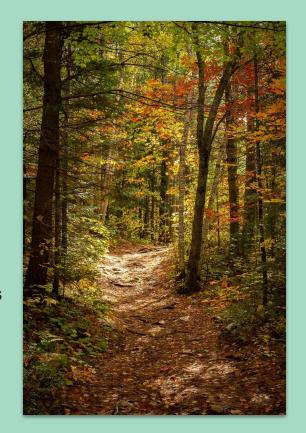


**Spend time in nature** - green spaces calm our minds, as does enjoying music or art (recent research confirms the connection)

**Keep an orderly environment** - chaos demands too much time, attention and energy. A schedule helps reduce the number of decisions you must make in a day. Anticipate what you may forget and place it strategically by the door (or a post-it note on bathroom mirror)

**Practice** deep breathing exercises, mindfulness breaks, successive muscle relaxation, grounding techniques, guided imagery

**Storytelling** - helps us re-package unfavorable experiences and reclaim the past...Something embarrassing happened? How will you tell the story?



Recognize that not all development occurs simultaneously and be patient

Remember that the human brain is not fully developed until mid-twenties

- Support your child in recognizing the importance of regulating emotions
- Don't be fearful of negative emotions

Encourage them to accept negative emotions as a part of life that comes and goes

## EMPOWERING PARENTS

- Teach your child to seek balance there is time for work, play, rest
- Don't be afraid to exercise parental authority in your child's decision making regarding the rigor of their classes & how they spend their time
- Don't allow them to compromise their mental health by taking on too much

## QUESTIONS?

## HERE ARE THE BEST SCHOOL BASED RESOURCES:

- Counselor (504 Case Carrier)
- School Psychologist
- Special Education Case Carrier
- School Social Worker
- Student Support Coordinator

Contact information available on each school's website or you can call your school's main office for assistance.



## REFERENCES AND RESOURCES

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Guare, R., Dawson, P., & Guare, C. (2013). Smart but Scattered Teens: The executive skills program for helping teens reach their potential. Guilford Press.

Executive Function Skills By Age (link)

Nurturing Executive Functioning Through Everyday Activities: It's Not About Using Checklists! An Interview with Sarah Ward (link)

What Executive Function Skills are Expected in High School? (link)

<u>The Educator's Guide to Executive Functions: How to Understand and Support Students in Need (link)</u>

Think Kids: Collaborative Problem Solving <a href="https://thinkkids.org/Rethinking-Challenging-Kids-Where-Theres-a-Skill-Theres-a-Way/">https://thinkkids.org/Rethinking-Challenging-Kids-Where-Theres-a-Skill-Theres-a-Way/</a> (link)

Thank
you for
joining
us
today!