THRIVE EMERGE

ADHD, EXECUTIVE DYSFUNCTION AND STRUGGLING TO LAUNCH YOUNG ADULTS

Executive function challenges are part and parcel of the underlying struggle for young adults transitioning to independence.

But what does EF really mean? How does impairment in this area make it so difficult for our kids? And what can we do about it?

As a psychiatrist working with neurodivergent teens and young adults for several decades, it is not unusual for me to speak with parents who report that "My child does not have ADHD. They just have problems with their executive function."

To which my reply is usually, "Well yes…and no."

To say that there is a great deal of confusion about the meaning of these terms – as well as the impact of executive dysfunction on our children and how best to manage it – is quite an understatement. Although in the past decade, public knowledge and acceptance of EF challenges has grown, the field is still sufficiently complex that a straightforward, clear explanation of these very critical cognitive and emotional processes might serve us all well.

By walking through the key aspects of Executive Function and ADHD, I hope I will be able to guide you to the most productive and supportive approach possible for your older teen and young adult. Your understanding, acceptance and guidance of them in this regard will be critical for their future success.

Let's start with the basics and then move through some of the more complex considerations for diagnosis and treatment.

EXECUTIVE DYSFUNCTION STORIES

As parents, we are very familiar with the many ways in which our neurodivergent teens and young adults struggle with managing life's daily demands:

- My child can spend hours playing video games, excited and engaged. But ask them to do their homework, and they struggle to get started, finish in a timely fashion and even hand it in once they've done it.
- My kid is so smart! They love learning but they do so poorly in school.
- I feel so sorry for my child. They love being around other people, but they always seem to butt in and say impulsive things. It's a real turn off for their peers.
- My two children are as different as night and day. Kid number one is quiet, level headed and does as she is told. And the second one – thank god we had the first one first! Irritable, always fighting with us, overreacting. She doesn't seem very comfortable in her own emotional skin.

- Learn from their mistakes? That's a joke! If they made that mistake yesterday, chances are they'll make it again in the future. What's so hard about just thinking about what you did and changing your actions in the future?

And the stories go on – problems with organization, impulse control, timeliness, school performance, social skills -- all frustrating, and all accurate descriptions of how impaired executive function manifests in the world.

But what do all of these behaviors and ways of thinking have in common? Is there some central connection that can explain how and why this happens?

WHAT IS EXECUTIVE FUNCTION?

Although many definitions and descriptions of executive function exist in the psychological research literature, they all converge on a central set of ideas: that the brain has "software packages" (neural circuits) that govern a range of cognitive, social and emotional functions that are necessary for creating adaptive responses to the demands of life; and for responding fluidly and flexibility to life's continuous changes and uncertainty.

Studies indicate that, although a complex set of networks in the brain are involved in creating executive function, the primary players are the prefrontal cortices – that part of the brain that sits above your eyes and behind your forehead. Lay your hand across your forehead and you will have located (at least on an external, superficial level) the home of executive functions.

Briefly, these are some of the key processes that make up what we call the executive functions:

1. The ability to initiate an action. As simple as this seems (to quote Nike: Just Do It), initiation of a behavior relies on a more complex foundation of processes such as feeling motivated, seeing the long-term value of acting and the consequences of not acting, planning the action and overcoming anxiety associated with performing the action.

   Glitches in any of these processes result in what we see all too commonly in our kids: procrastination. Once we begin to appreciate how complex this first executive function is, we might begin to back away from "Just get off your keister and get it done!" as a behavior change strategy – and begin to explore other approaches that might actually change how our young adult behaves.

2. The ability to plan and organize a complex set of steps, options or tasks. The classic example of this in the school setting is the response to a long-term project, particularly if it is relatively open-ended in nature. "Write a 10 page paper on any aspect of world history from the 1st century to the present time" is

the kind of project that will throw the executive-function impaired teen or young adult into a panic.

In this case, the brain is being asked to generate, sort, prioritize and sequentially order a huge set of ideas. Oftentimes, the teen's brain goes blank and they feel overwhelmed and unable to begin this organizing process. The project waits until the last minute, at which point the stress is sufficiently high to drive the prefrontal cortex into a rescue mode in order to get the work done – oftentimes late, and at a far lower quality than they are capable of.

Challenges with organization also show up around time and things – structuring a day, getting out on time, and keeping papers, clothes, notebooks, backpacks, bedrooms and so on neat.

3. The ability to hold in short-term (working) memory a set of instructions or ideas. We see this in the request of "Go to the store for a loaf of bread" being followed by the purchase of 3 items – ice cream, fish food and toothpaste – but no bread. We see this in "Go upstairs, brush your teeth, grab your backpack and put on your shoes" followed by, 10 minutes later, "Have you gotten that done?" "Gotten what done?" More subtly and conceptually, we might see the employee trying to formulate a complex set of ideas into an integrated concept but not being able to "herd the conceptual cats" well enough to create a comprehensive picture.

4. The ability to regulate emotions. All little kids are emotionally dysregulated – precisely because their prefrontal cortices are immature and can't reliably and predictably exert top-down control over the emotional centers of the brain. This is hard for the parents and the child as well, since these emotional storms are quite distressing both internally for the child and to those around them.

   With EF impaired youth, this quality of poor emotional control persists, perhaps well into their late 20s. Tantrums when younger, irritability and door slamming when older and an overall emotional tone of rockiness and unpredictability marks the daily course of these individuals – and makes family and social life challenging at times. As much as we love our friends and children, we all have a finite capacity for managing the emotional storms that seem to gather around these teens and young adults.

5. The ability to be cognitively flexible in order to adapt to the rapidly changing demands of the world. Both the external world and our internal worlds – think emotional, physiologic, sensory, social and cognitive data – change continuously. What might be a realistic expectation in one moment can change, requiring the brain to quickly let go of one expectation with minimal stress, generate a new plan and align one's emotions and intentions with that new plan – all in seconds.

   The cognitively rigid brain balks at uncertainty and the unknown. The more unpredictable a situation is, the more it can lead to high levels of anxiety and

overwhelm. I have one patient who feels very stressed before going out for the evening – unless he knows where he is going, how he is getting there, who will be there, how will it be handled if the situation changes from initially anticipated, how and when he will get home, and so on. What for the neurotypical brain might feel playfully spontaneous can for the EF impaired brain feel exceedingly uncomfortable.

6. The ability to control impulses and avoid distractions. Staying focused is a data processing game: the brain must select the small amount of data – both internal and external – that needs to be in conscious awareness to drive adaptive behavior. If I am listening to the teacher, but that song keeps going through my head, or my body is telling me to move around, or to throw that paper airplane in class or to pay attention to two students talking to each other, then productive focus – and successful performance – becomes very problematic.

   Stimulus seeking – and consequent bad decision making – is also characteristic for many with executive dysfunction: when the prefrontal cortex is struggling to function, the brain craves a lot of stimulation – because it energizes, creates focus, drives motivation, makes the person feel good, satisfies an itch. But driving too fast, or getting drunk at the party, or skipping class has its consequences. When the top-down regulation from the prefrontal cortex (the angel on one shoulder saying "Think of the consequences of what you are about to do.") is overridden by the devil on the other shoulder ("Right now, this seems like a good idea."), the outcomes of unbridled spontaneity can range from troublesome to disastrous.

7. The ability to be self-aware. Emotional self-awareness – understanding one's reactions and the psychological drivers for our choices – is a critical element in learning to make more adaptive choices in life. But if self-reflection is limited, then self-correction is less likely to occur. Self-awareness is also a critical element in emotional intimacy - continuous, nuanced awareness of oneself and of one's partner is what makes relationships work over the long run.

WHEN EXECUTIVE FUNCTION IS GLITCHY, WHAT DOES IT LOOK LIKE AT THE JUNCTION WITH YOUNG ADULTHOOD?

The participants in our program for struggling to launch, neurodivergent older teens and young adults at Thrive Emerge – The Village – typify the challenges that impaired executive function presents as the demands for independent life increase. Although each individual brings their unique qualities, certain patterns emerge across this population that are in part related to the prefrontal cortex struggling to exert top-down control over a very noisy brain. Any parent with a neurodivergent child knows these patterns well:

- Multiple failures in key developmental areas – academic, employment, social

- Emotional dysregulation and overreactivity, often marked by high levels of anxiety and depression
- Avoidance of tasks that demand a high level of sustained effort and organization
- Inability to structure a productive day
- Use of distracting, numbing and high stimulation activities as part of an overall pattern of avoidance – including most typically screen and marijuana overuse.
- Poor self-care – sleep, grooming, diet, exercise
- "Arrested" emotional and social growth

As we see repeatedly in our program, if the "director" struggles to "rein in" and organize a boisterous brain over several decades, the results are cumulative and – at least in the short run – compromise normal development.

HOW DOES EXECUTIVE DYSFUNCTION RELATE TO ATTENTION DEFICIT DISORDER – AND HOW DO WE DIAGNOSE THEM?

I like to describe EF challenges and ADHD as first cousins – closely related but with distinctions. Both refer to the ways in which the prefrontal cortex – the seat of executive dysfunction – only partially regulates a broad array of emotional, cognitive, sensory and social "software packages" residing throughout the brain. The true distinction has to do with how we measure the outcomes of glitchy executive functioning.

Recall the story of the blind-folded scientists each describing their observations of the elephant from a different perspective. For some, the elephant is like a solid tree, for others a smooth, hard surface with a point and others a flexible hose. Ultimately, all of their observations are correct, with each set of observations focusing on a different element of the same entity.

For neuropsychologists, executive dysfunction is identified using diagnostic instruments that explore with a fine tooth-comb the many nuanced cognitive and emotional processes of the prefrontal cortex. This is typically supplemented with observational data from parents and teachers in the home and school settings. This testing will usually look at other cognitive functions that can impact the performance of the individual, such as specific learning disabilities, processing speed, and errors in verbal and non-verbal processing.

This detailed psychoeducational report can be used as the basis for accommodations for school and for academic testing, such as the SATs. In a sense, the prefrontal "elephant" (and other parts of the brain) is viewed from many angles simultaneously for a very complete analysis of the individual's cognitive and emotional functioning.

Clinicians such as psychiatrists and pediatricians will take a different look at the elephant. Using criteria from the Diagnostic and Statistical Manual (DSM) – the clinician's diagnostic bible, as it were – they will view prefrontal cortical dysfunction from two angles: first, is it resulting in symptoms of inattention? And second, do we see

indicators of hyperactivity and impulsiveness? Essentially, the DSM focuses on the executive functions involved with focus and distraction; and control of impulses (motor, social, emotional).

If a sufficient number of symptoms are present, they are considered the basis for diagnosing Attention Deficit Hyperactivity Disorder – inattentive subtype, hyperactive/ impulsive subtype or combined subtype.

The purpose of the clinical evaluation is typically less to provide a basis for accommodations; and more to provide a basis for medication management and executive function coaching – two key tools for helping modulate the symptoms of executive dysfunction.

IF MY CHILD IS DIAGNOSED WITH EXECUTIVE DYSFUNCTION OR ADHD, HOW DO WE AS PARENTS HELP?

Each family needs to consider these two kinds of diagnostic workups – i.e., psychoeducational/ neuropsychological vs. clinical. They each have their pros and cons and serve different purposes in driving the treatment of prefrontal cortical dysfunction. But a finding of EF dysfunction from either approach delivers the same message: to be successful meeting the demands of an independent life, your child will need support and treatment.

And for many kids, this support may need to continue for a lifetime. For some individuals, symptoms of ADHD/ Executive Dysfunction can wane over time as skills are acquired and as the prefrontal cortex matures through the process of myelination – where nerves cells become sheathed by a fatty coat that increases the speed of transmission of signals between nerve cells in the brain – and hence the efficiency and effectiveness of the brain's "software".

But many individuals will continue to benefit from several kinds of treatment, including:

- Executive Function Coaching – to lay a foundation of "externalized" executive function – scaffolding and cueing that puts the prefrontal cortex outside of the individual
- Medication Management – with stimulant +/or non-stimulant medication – to increase the activity and effectiveness of the prefrontal cortex; and to deal with the depression and anxiety that often accompanies ADHD
- Accommodations at School and in the Workplace – to adapt the child's environment to better fit their unique brain
- Family and Parenting Support – to deal with the sometimes disruptive nature of ADHD in the home; and to help parents better manage these symptoms
- Individual Therapy – to deal with issues of shame and lack of confidence that often accompanies ADHD/ EF issues

- Social Skills Training – for those kids who struggle with impulsiveness in social settings; or with social anxiety; or with missing social cueing as when an Autism Spectrum Disorder is also present.
- Emotional Self Regulation Training – individuals can learn to better manage their emotional swings and overwhelming feelings using techniques from Cognitive Behavioral Therapy (CBT) and Dialectical Behavioral Therapy (DBT).
- Addictions/ Overuse Treatment – for both marijuana and screens – these two issues often go hand in hand with ADHD – as coping skills to manage anxiety and to provide stimulation and a sense of short-term reward that might be lacking in other aspects of the person's life.
- Self-Care Support - keeping the body healthy keeps the brain healthy. This is certainly important for everyone, but particularly so for the neurodivergent brain that has to work twice as hard just to keep up with life demands. Helping the individual structure a daily schedule, normalize sleep hours, improve diet and increase exercise can support the other treatments.

Parents play a critical role in helping their older teen and young adult transition successfully into an independent life. Here are a few key tips:

- Understand that executive dysfunction/ ADHD is biologically based: it is first and foremost driven by genetics, present at birth and will most likely continue throughout the person's lifetime.
- Other than broadly encouraging our child to always do their best, we must remember that ADHD has nothing to do with willpower. It is not a moral shortcoming, it has nothing to do with laziness or not trying hard enough; and it will not respond to criticism, comparison with others or belittling.
- If you are angry, frustrated or scared, find ways to soothe your own feelings. Don't direct them at your child. The degree to which you are willing to look at your own emotional reactions about having a neurodivergent child is the degree to which you will be able to help that child.
- Work towards compassion and away fom blame.
- Explore your role as an EF coach: do I push too hard, am I too lax? Get professionals' opinions about how your role needs to change over time to allow continued strong support while making ample room for their individuation.
- You cannot take away your child's suffering. Just as we all did, they will learn from their sometimes very hard and painful mistakes. Find that fine line between appropriate support vs. rescuing. And always be alert to risk – too depressed, too isolated, too many drugs. There are times when your vigilance is very much required.
- Don't do this alone: get help for them and for yourself.
- Expect to be in the saddle for the long haul: ADHD brains mature about 4-6 years later than peers. What looks like a more competent version of adulthood begins to show up in the late 20s. Be patient.
- Expect complexity: 70% of those with ADHD have some other mental health diagnosis: anxiety, social anxiety, tic disorders, mood disorders, OCD and

learning disabilities. Be alert and provide support and treatment for all of these challenges.

- There is a lot of overlap between the symptoms of ADHD and Autism Spectrum Disorder. They are not the same condition, but frequently share common elements like emotional dysregulation, cognitive rigidity and executive dysfunction. If you see one condition, be curious about the possible presence of the other.
- Make room for your child to grow up as they need to – not how you expected them to. The road may be longer, with more twists and turns, ups and downs than expected. Make room for options: gap years, community colleges rather than 4 year colleges, vocational training and so on. Encourage them to discover how they want to live, learn and love.

But most of all: be hopeful and enjoy them. I have three daughters, two of whom are neurodivergent; and I work with many more neurodivergent young adults. They are each challenging, fascinating and wonderful in their own right. They want to grow, to explore, to love and be loved. More often than not, they find their own way of connecting with a fulfilling life.

Be open to how they experience the world. Their journey – with all its struggles – is still a gift that we as parents have had the good fortune to receive. When scared and frustrated, step back and hold them in this larger perspective. The reward for doing so will be immense for all involved.