EXECUTIVE FUNCTION: What You Should Know Now

Students with learning differences like attention deficit hyperactivity disorder (ADHD) have poor executive functioning. But what does this actually mean?

Executive Function Defined

Executive function skills are a set of cognitive abilities that control and regulate other abilities and behaviours necessary for goal-directed behaviour. These mental skills include working memory, activation, and inhibitory control, which allow students to:

Hold information in mind long enough to process and act on it.
Working memory is the brain’s system for maintaining and manipulating information in real-time. The ability to hold small bits of information at once, synthesize them, and act on them is critical for academic tasks, reasoning, and planning.

Initiate and stop actions.
Activation initiates focus in preparation to think or act. It’s the necessary first step in completing a task such as starting a homework assignment, concentrating in class, or getting motivated to leave for class on time.

Monitor and regulate behaviours as needed.
Inhibitory control is the brain process that forestalls impulses. It quiets parts of the brain when they’re not needed. Inhibition is needed to ignore distractions, to stop from blurting out the first thing that comes to mind, and to resist what is immediately gratifying to achieve a later goal.
The Anatomy of Executive Function

Executive functions are run by the prefrontal cortex. This part of the brain does not finish developing until the mid-20s. Yet, the limbic system, which is responsible for emotions, kicks in during adolescence. So, teens’ emotions are moving at full sail, without a captain.

The Brain Delay

The brains of students with ADHD develop about three years later than the brains of their neurotypical peers. This delay makes academic and social connections tough for these students. For teens, the neurological difference can be a powerful deterrent to joining things like team sports, school clubs, or even participating in group work. Give them a few years and their “young mind” will be to their advantage!