



Pediatric Consultation Specialists, PLLC
Behavior ★ Learning ★ Success

Executive Functioning

What is executive functioning?:

Executive functioning encompasses actions used in the self-regulation and organization of behavior; including self-awareness (meta-cognition), inhibition and interference control, nonverbal and verbal working memory, motivation, planning and problem-solving.

Executive functions allow us to wisely use our intelligence and help us maintain an appropriate problem-solving pattern toward attainment of a future goal. These skills are crucial in successfully managing school demands. Impaired executive functioning affects the *regulation and use* of all areas of cognitive functioning, including attention, planning, sequencing, and monitoring multistep tasks.

Executive functions predominantly take place in the prefrontal cortex of the brain. This is the last area of the brain to develop and will continue to develop through the mid-to-late twenties.

Hallmark features of executive functioning:

- Regulating attention and behavior to match environmental demands
- Demonstrating judgment and foresight
- Shifting flexibly between competing activities/trains of thought
- Generalize learning to new situations
- Work automatically and efficiently
- Inhibit impulsive responses
- Plan ahead

- Distinguish relevant from irrelevant pieces of information
- Initiate or getting started on tasks
- Utilize working memory (i.e., holding information in your head and manipulating it)
- Organization
- Carrying out goal-directed behavior or future-oriented behavior
- Multitasking
- Using feedback effectively

Executive dysfunction adversely impacts school functioning:

- Easily distracted; Poor sustained attention
- Disinhibited responses lead to poor choices
- May forget one part of a problem while working on another segment
- Difficulty adjusting/changing a problem-solving style when it is not working
- Repeats mistakes
- Absence of a plan to solve problems
- Poor use of time (especially to prepare for upcoming exams or projects)
- Difficulty paraphrasing or summarizing
- Procrastination and lack of follow-through
- Difficulties keeping several things in mind and keeping the information well-organized
- Poor organization often impacts recall of previously learned material

- Difficulty with sequenced, multistep tasks
- Inconsistencies in academic and memory skills
- Poor test taking

Overall, students with executive functioning deficits have difficulty showing what they know.

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How to accommodate for EF Weaknesses

Impulse Control

- Use visual cues (e.g. big stop sign on door)
- Develop habits that interfere with impulsive behavior (e.g. put hands in pockets)
- Use of a fidget toy (need rules—can't grab someone else's; can't throw the toy)
- When a student begins to interrupt, ask her to write down comments/questions in a notebook—make sure you give her a chance to talk (if you say “just a minute”, make sure it is just that)

Initiation

- For younger kids, use a song to guide them through morning routines.
- Younger kids may need help getting started (e.g. when cleaning their room, go with them to their room and suggest what they should start with; be specific)
- Before starting a seated task, engage in some gross motor activity (quick walk, throw a ball)

Planning/ Time Management

- Use timers/ Alarms
- Estimate amount of time needed for a task and then write down actual time
- Use calendars (build habit for checking them)
- Request assignments one week in advance to allow for planning homework and studying
- Help break down assignments, projects, and tasks into reasonable parts, then set deadlines

Cognitive Flexibility

- Review upcoming changes to schedule or environment (e.g. substitute teacher)
- Allow for a break/ place to calm down when child encounters frustration with change
- Teach relaxation breathing
- Provide warnings/signals prior to transitions

Organization

- Email assignments to teacher and self
- Keep a second set of textbooks at home
- Frequently check backpack, notebooks, desk, locker, and assignment book
- Establish weekly time to organize desk, etc.
- Color coding of folders
- At home, be sure to establish an organized study space, with all needed materials, dry-erase board/calendar

Working Memory

- Use lists as reminders (words or pictures)
- Use a voice recorder/voicemail messages to record tasks, assignments, reminders
- Note-taking services; Students should be given a copy of class notes
- Help students develop mnemonics or other strategies to help remember a series of steps
- Teach visualization strategies to enhance recall

Self-Monitoring

- Highlight math operation signs
- Proofread aloud
- Proofread by reading backwards
- Double check assignments
- Reread the directions after completing a task and go back to see if you followed them
- Allow students to review assignments and correct errors which are marked