



EXECUTIVE FUNCTIONING

What is Executive Functioning?

A group of complex mental processes and cognitive abilities that help us regulate, control and manage our thoughts and actions. Our executive functions consist of skills including:

- **Planning and Organising:** This refers to the ability to manage current and future tasks. *Planning* refers to the ability to anticipate future events, to set goals, and to develop appropriate sequential steps ahead of time in order to carry out a task or activity. *Organising* refers to the ability to bring order to information presented and to appreciate main ideas and key concepts when learning or communicating ideas. It also relates to the organisation of materials and time when completing a task.
- **Working memory:** The ability to remember specific short-term memories needed to execute a function or daily task.
- **Initiating:** The ability to start an activity, plan, or task and to independently generate ideas, responses or problem-solving strategies.
- **Self-monitoring and Evaluating:** Monitoring behaviour is necessary both for tasks as well as interpersonal behaviour. *Task-oriented* monitoring or work-checking habits refer to the employee's ability to assess their own performance during or shortly after finishing a task to ensure accurate and appropriate completion. *Self-monitoring* of interpersonal behaviours involves the employee keeping track of the effect that their behaviour has on others in the workplace.
- **Inhibiting:** The ability to resist impulses and to stop one's own behaviour at the appropriate time.
- **Emotional control:** The ability to maintain emotional control while experiencing both positive and negative affective states.

In the workplace, these skills allow us to finish our work on time, ask for help when needed, wait to speak until we're called on and seek more information.

Many people on the spectrum experience executive dysfunction and have challenges in organising and regulating their behaviour in ways that will help them accomplish assigned projects and tasks.

Executive Dysfunction

- Challenges with problem solving
- Difficulty grasping a new task
- Disorganised
- Impairment in judgement
- Mental inflexibility
- Difficulty incorporating feedback
- Difficulty reflecting on decisions



Activities Involving Executive Functioning

- The ability to change our minds and make mid-course corrections while thinking, reading and writing
- Completing a task before the deadline
- Asking for help or seeking out more information when working on a task
- Keeping track of time
- Keeping track of more than one thing at once
- Solving an unfamiliar problem
- Forward thinking
- Managing time to enable completion of daily tasks
- The ability to meaningfully include past knowledge when making a decision/ or completing a similar task
- Learning new tasks or instructions
- Carrying on a conversation in a noisy environment
- Planning and arriving on time for work and/or meetings
- Reading and following complex instructions
- Composing an email

STANDARD INTERVENTIONS FOR EXECUTIVE DYSFUNCTION

There are a number of intervention strategies for executive function dysfunction. Listed are interventions which are effective and reasonable to implement in the workplace. The interventions are categorised within specific areas of deficit. It is recommended that these skills are typically best taught in the context of everyday executive workplace routines as opposed to teaching the specific skill out of context.

Below is a listing of specific executive function skills and appropriate interventions to improve these areas of functioning.

Planning and Organising:

Planning interventions include the following:

- Encourage your employee to develop a plan of how to most efficiently and effectively complete a certain task. Firstly, discuss with them a plan of how to go about the completion of various common tasks. The employee should be encouraged to ask themselves various questions such as "How did I do the task?", "Did the way I did it work? Or is there another, more effective way?", and "Is there a better way to do this the next time?". This will encourage your employee to reflect and it will set up a routine for future tasks.

- The employee may benefit from a "cookbook" of steps for common or routine tasks that are performed regularly. This "cookbook" could be put onto the computer system for other new



employees to utilise when they first commence employment and this can provide the employee with a sense of importance for this task.

- Employees with planning difficulties would benefit from increasing awareness of upcoming expectations and activities. This can be accomplished by reviewing expectations at the beginning of the week as well as at the beginning of each day (if required). Managers can help facilitate the development of a plan of how to meet various expectations in the most effective and efficient manner. Built into these discussions should be ways to prioritise task completion and monitor progress.

- For long term projects, the employee should be encouraged to develop a time line for completion of the various components required. It may be helpful if this is placed on a calendar to reinforce awareness for the employee.

Organisational interventions include the following:

- The employee would be encouraged to learn and utilise a system for recording assignments to be completed. This could be an assignment notebook or electronic recording device.

- The employee would be encouraged to make decisions throughout the day as to what materials need to be used to complete their assigned tasks.

- The employee may need extra organisation time at the outset or end of the day in order to prepare for the day (checking for times of meetings, what time they need to be at work, working out buses/trains to get to work at the correct time, any deadlines that are upcoming and additionally any necessary contributions they may need to make in meetings).

- The employee should develop a personal organisational system which includes a daily planner/assignment notebook, folders/notebooks for record keeping.

- The accumulation of unnecessary papers and materials is often a challenge for employees with organisational and planning difficulties. A manager should help the employee identify what materials are necessary to keep and where they should be put (same for their computer desktop).

- An accumulation of tasks that are not urgent can be a challenge for employees who have difficulties organising and planning. Working with your employee to write out everything that they have been assigned and prioritising them from most important to least important will be beneficial.

Working Memory:

This deficit can affect many aspects of functioning at work and interventions can include the following:

- Establish eye contact prior to giving important instruction to the employee.

- Present information at a slower rate or repeat it as necessary.

- Presenting information in a variety of different formats (ask what your employee prefers).

- Write multi-step directions out for the employee and encourage the employee to develop the habit of writing down important information for future reference.

- Ask the employee to restate the directions as necessary (before commencing a task).

- Pre-teach the general framework of new information highlighting the most important aspects to be attended to. Providing an outline prior to giving a lecture or a rubric to follow for assignments can be helpful.



- Encourage your employee to take “attentional breaks” when activities require sustained and intense working memory abilities. These can include brief motor breaks where the employee is allowed to move around, get a drink, and get some fresh air etc.
- Balancing the amount of time on any one task, especially if it is demanding on working memory skills can be helpful. Extended work periods demanding working memory skills can lead to significant cognitive fatigue and increased off-task behaviour.
- Individuals with working memory deficits often experience information retrieval delays. This leads to a slower rate of cognitive processing. Provision of extended time for projects or projects with longer deadlines would be appropriate if these processing speed delays are noted.
- Also, the elimination of certain types of tasks that primarily demand speed of task completion as a measure of competency may be beneficial.
- Utilisation of “self-talk” by the employee in order to guide themselves through a multistep task or problem can be helpful.
- Employees may demonstrate difficulties keeping track of more than one to two steps at a time. Providing a written checklist of steps required to complete a task or problem can serve as an external memory support. Work tasks that may benefit from this type of intervention could include completion of long equations and organizing and completing a long-term project.
- Written language tasks are often affected by poor working memory skills to the extent that the employee is required to attend to idea generation, thought organisation and sequencing, sentence structure, punctuation and spelling in a simultaneous and fluent manner. Employees would be encouraged to break down the written work into several smaller steps attending to each aspect separately.

Initiate:

Difficulties in this area can be secondary to other executive functioning issues (e.g., disorganisation) or emotional concerns (e.g., anxiety). As a result, observation and discussion with your employee is important in tailoring intervention strategies that will be most effective.

Possible strategies include:

- Build in routines for everyday tasks such that the initiation and completion of tasks become automatic for your employee. For example, the morning routine or a project task that your employee often does can be broken down into a sequence of steps and these steps can be written on a list or on their calendar so that they can be easily followed.
- External prompting such as providing a verbal cue to begin a task may be necessary for the employee to begin the task (simple phrases like “Let’s get started”, “Time to begin step one” are helpful).
- It is helpful to set expectations what is to be accomplished within a given work time. Sitting with your employee and outlining what needs to be done with a specific end time is helpful.
- Breaking down a large task into smaller, more structure steps can be helpful. For example, after a task is presented, the project manager, buddy, or people manager should go to the employees working space and review expectations for work completion, set a goal for the employee to finish a certain amount of work within an agreed period of time. The manager, buddy or people manager would then stop back at the desk to determine whether the employee was able to initiate and complete the work agreed upon at agreed intervals.
- The use of a timer may be helpful to an employee to begin and persist on a task.



- Colleagues can also be helpful to cue the employee with initiation problems to begin work.
- Managers should be aware of those tasks that may be most challenging for the employee and be more active in facilitating the initiation and follow through on these assigned tasks.
- Employees with initiation difficulties may benefit from learning a structured, systematic approach to idea generation. These can include brainstorming, webbing, and the use of graphic organisers. Working with your employee to brainstorm for the first couple of times can be helpful. Additionally, presenting one idea could be enough to get your employee started.

Self- Monitoring and Evaluating:

Specific interventions include the following:

- Build in a review and edit procedure for each task completed. This should involve setting aside time to attend to this aspect of task completion and asking the employee to signify that they have reviewed work by making a check mark or double underline on reviewed responses.
- Set goals for the employee for accuracy rather than speed of work completion.
- Employees with weak monitoring abilities often demonstrate poor awareness of time. Specific efforts should be made to help the employee become more aware of their productivity which is defined as how much work they complete within a given time. One intervention can include asking the employee to predict how much work they will accomplish within a specified period of time, allow them to work for that time period, and assess the accuracy of their prediction.
- Employees should be encouraged to utilise external cues such as the clock, a timer, or the progress of colleagues to help assess the need to adjust their speed of task completion.
- In the area of interpersonal behaviour, managers working with the employee should provide instructive feedback based on their own experience working with the employee (e.g., "When you talk to me you stand too close"). In conjunction with this feedback, the employee should be taught the verbal and nonverbal behaviours that others demonstrate relating to positive and negative interpersonal behaviour that they can attend to in order to assess their impact on others.
- Managers should observe the interpersonal behaviour of the employee with colleagues and provide feedback as to appropriate and inappropriate behaviours demonstrated. Feedback should also be provided regarding the verbal and nonverbal behaviours of colleagues that provided information as to how the employee could have modified their interaction pattern (e.g., "I noticed when you rushed into to the room and spoke loudly in Ben's ear he turned away and went to talk to someone else").

Inhibit:

Specific helpful intervention strategies include the following:

- Increase awareness of appropriate behaviour through the provision of more explicit, specific and clear set of rules and expectations. These expectations should be reviewed regularly, especially in novel situations or when impulsive behaviours persist.
- Regular cuing and feedback to the employee is necessary to highlight the need to control impulses. This input can be verbal or visual. *Verbal cues* could include statements such as "Please raise your hand before you shout out a question" or "When you talk to me without listening to all that I have to say it frustrates me." *Visual cues* can include holding up a finger or hand to cue the employee to wait or letting your employee know that you want them to wait their turn until you make eye contact with them.



- Some employees with impulsivity rush to begin their project or task before reading or listening to instructions. To ensure your employee has read and processed the instructions, ask them to restate the instructions to ensure they were listening. Additionally, you can ask them to verbalise a plan of approach before starting work.
- Social difficulties are common for employees with poor verbal and behavioural inhibition. They would be encouraged to attend to interpersonal spacing and boundaries, to make a conscious effort to listen to others before responding, to resist the tendency to dominate the conversation, and strive to make positive versus negative comments to others.

Emotional Control:

This refers to the employee's ability to maintain emotional control while experiencing both positive and negative affective states. With positive emotions, the employee may be overly animated and cheerful. When experiencing negative emotions such as frustration or disappointment the employee may become irritable or explosive. Dimensions of frequency, intensity and duration of inappropriate emotional expression are often atypical compared to others in the workplace.

Specific interventions would include the following:

- A discussion about various emotional states and ways to appropriately express these feelings should take place. Providing your employee with direct feedback about ways in which their emotional expression affects others would be appropriate and helpful.
- When the employee will be entering a situation that challenges emotional control, there should be a preview of what is likely to take place and suggestions about appropriate ways to respond. Following there should be a review of how the employee managed their emotions with reinforcement given for positive and effective expression of emotion.
- It is often the case that individuals with poor emotional regulation find it difficult to manage negative affective states (e.g., frustration, disappointment). Formal teaching of coping strategies including behavioural and cognitive interventions would be recommended. *Behavioural strategies* would include walking away when upset, practicing calming and relaxing behaviours to regain emotional control, and discussing upset feelings once emotional control is re-established. *Cognitive interventions* include helping your employee to become aware of negative thinking patterns such as "Things are always unfair." These would be identified and replaced with positive cognitions such as "I did what I wanted yesterday so it is someone else's turn to pick what to do."
- For those with more significant anger management issues, a plan should be established as to how angry behaviour will be managed in a period of upset. Typical interventions include early identification of irritable and angry feelings, disengagement in order that all involved maintain or regain emotional control, and processing what occurred and how the situation can be effectively handled in the future. This processing should be non-threatening and instructive.