Headway
the brain injury association

Executive dysfunction

after brain injury

This publication has been written to offer information on executive dysfunction, a common issue after frontal lobe injury. It explains what executive dysfunction is, the impact of this, where to get professional support for this issue and tips for coping.

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Contents

What is executive function/dysfunction? 1
Executive dysfunction – impaired skills 2
The impact of executive dysfunction 3
Professional support 5
Tips for coping with executive dysfunction 5
Motivation 5
Organising 6
Flexible thinking 7
Planning 8
General tips 8
Acknowledgements 9

What is executive function/dysfunction?

Executive function is the name for a collection of thinking skills that we use when solving problems, making decisions, planning and completing tasks, reflecting on our activity and correcting mistakes. It involves cognitive skills such as:

- planning;
- motivation;
- multi-tasking;
- flexible thinking;
- monitoring performance;
- memory;
- self-awareness, and;
- detecting and correcting mistakes.

We rely on many of these executive function skills on a daily basis, such as to cook a meal, follow a conversation, interact with others, work, study and plan our day, among other activities.

These skills are processed in a part of the brain called the prefrontal cortex. Other parts of the brain closely connected to the pre-frontal cortex are also involved.

Unfortunately, the prefrontal cortex's positioning in the brain (at the front) makes it a common site of injury. People with injury to their prefrontal cortex can therefore develop difficulties with their executive function skills, and when this happens, it is described as executive dysfunction.

Executive dysfunction is also sometimes referred to as 'frontal lobe problems' or 'dysexecutive syndrome'.

The information in this publication does not replace clinical guidance from medical professionals. You should always get advice from your GP or other suitably qualified professional for help with managing the effects of brain injury.

Executive dysfunction - impaired skills

Some of the executive functional skills that can be affected following a brain injury are as follows.

Motivation and initiation - a brain injury survivor may lose their sense of 'get up and go', making it difficult for them to start or complete tasks. This may be mistaken by others for laziness or disinterest. For example, a survivor may need to be frequently reminded about needing to book an appointment because, while they do intend to do it, they don't take the initiative to make the appointment phone call and get it arranged.

Organisation - a brain injury survivor may struggle with staying organised. This can affect their ability to make plans and see these through efficiently. Thinking through the steps to get things done may be difficult for them. For example, a survivor may be unable to keep track of appointments and frequently get these muddled up.

Flexible thinking - adapting or changing behaviour, or switching between tasks, may be difficult for the brain injury survivor. They may become 'stuck' or 'fixed' on certain information or behaviours - this is called 'rigid thinking'. For example, a survivor may not think to lower the heat if food is cooking too quickly.

Problem-solving - thinking through a problem and being able to form a solution may be difficult for the survivor. It may also be difficult for them to anticipate the consequences of their decisions. For example, a survivor may be unsure of what steps to take if they have lost their bank card.

Impulsivity - a brain injury survivor may act without fully thinking through the possible consequences of their actions. For example, they may spend most of their pay cheque on one item, without considering the bills that need to be paid later.

Planning - thinking ahead and going through the various steps needed to complete an activity may be more difficult for the brain injury survivor. For example, it might be difficult for them to think through the steps needed to arrange and book a holiday.

It may be difficult to identify exactly which areas of executive function are impaired in a brain injury survivor, and often more than one skill has been affected.

Specialist tests can be completed by professionals called neuropsychologists can help with identifying areas of difficulties, and therefore possible solutions to help. More detail about this is available in the section *Professional help*.

The impact of executive dysfunction

Executive dysfunction can cause problems with multiple aspects of day-to-day functioning, such as:

- **starting or finishing tasks**, such as cooking a meal;
- **interacting with others**, such as socialising with friends and family;
- **making decisions**, such as what to wear or what activities to do;

- **thinking through problems** and forming solutions, such as identifying what to do if someone misses the bus;
- **using alternative solutions** if needed, such as using alternative ingredients in a recipe;
- **behaving appropriately and controlling emotions**, such as being able to control frustration if stuck in traffic;
- **planning ahead**, such as preparing tasks to be done across the coming week.

Other people may identify these behavioural changes in brain injury survivors, but may not understand that they are due to brain injury. For example, colleagues of a survivor may notice that they are not meeting work deadlines in the same way as they did before the injury. Partners or spouses may feel that the survivor does not make as many social plans as they did before the injury, and misinterpret this as the survivor being disinterested. The survivor themselves may feel upset, embarrassed or frustrated about being misunderstood.

On the other hand, some survivors may themselves be unaware of their executive dysfunction - they may not have insight into the impact of their brain injury. This may cause family and friends to feel upset or concerned, especially if the survivor refuses help.

Returning to work or education may be particularly difficult for survivors, as many executive function skills are used for working and studying. Struggling to prioritise jobs, multi-task, stay organised, initiate new tasks or figure out how to correct mistakes can all be challenging for a survivor with executive dysfunction.

Daily tasks can be challenging, for example going grocery shopping, choosing what to wear, getting ready in the morning, cooking meals, completing activities through the day or engaging in hobbies. These daily challenges may affect the survivor's quality of life, causing feelings of frustration or upset.

As well as these daily difficulties, survivors may find themselves facing challenging situations that may put them at risk of harm or danger. For example, being unable to detect and correct mistakes may cause a survivor to get into arguments with others who do not understand they

have had a brain injury that has affected their cognitive skills. Or a survivor may have financial problems if they have impulsively spent more money than they ought to have.

Professional support

Professionals called **clinical neuropsychologists** can help with identifying areas of executive dysfunction that may be causing difficulties. They can do this by asking brain injury survivors to complete specific tests designed to identify cognitive issues, as well as having conversations with the survivor and their family about the difficulties being experienced.

Once the areas of difficulties have been identified, clinical neuropsychologists can suggest methods of improving or coping with executive dysfunction.

Living with executive dysfunction, or other effects of brain injury, can cause some survivors to develop feelings of sadness, worry or frustration. In these cases it may be helpful to speak to a counsellor or other psychologist, or to contact organisations with mental health helplines such as Mind and Samaritans. Our Headway helpline is also available for brain injury survivors to talk about their feelings, and is available on 0808 800 2244 or helpline@headway.org.uk.

For some, these feelings may develop into mental health difficulties such as depression and anxiety. In these cases, it may be necessary to get professional support. Contact your GP to discuss your concerns.

Tips for coping with executive dysfunction

The following tips are general suggestions for coping with various issues related to executive dysfunction. They do not replace clinical guidance you may have already received from a professional.

Motivation

- Make a note of things that need to be done, and stick this somewhere in an obvious place that you are likely to see regularly. For example, you could write this on a brightly

coloured Post-it note and stick it on your bedroom mirror. Cross items off as you complete them, so that you can feel a positive sense of achievement that may encourage you to complete the next item on the list.

- If you are struggling with completing a task, try to identify reasons why the task is important to you. Think about the sense of achievement you may feel, any positive outcomes that may result from the task or how it may make others feel when you have completed it. Sometimes it can help us to complete a task if we are emotionally motivated to do it.

- Set alarms to try and prompt yourself to begin an activity. If appropriate, set another alarm by when you want a task to be completed, if this will not put too much pressure on you.

- Set times and dates by when you want to complete an activity by and make a note of this, for example on a calendar.

Organising

- Keep a list of things that you need to do or need to remember, or use a diary to organise your time. Try to get into the habit of writing things down and checking your diary regularly. This may take some practice, and others may need to remind you to do this.

- Try to write important information down as soon as you have it. For example, if you have been given a hospital appointment date and time, write this down immediately on a calendar so that you do not forget about it later.

- Use a filing system to keep important papers and emails organised, for example keeping a separate, labelled folder for hospital letters.

- Try to plan things in advance where possible so that you have enough time to get things organised.

- Break larger tasks down into smaller ones, and keep lists for each part of the task. Cross these off as you complete them.

- Try to keep things that you regularly use or take out with you in the same place, such as your mobile phone and keys.

- When you are in the middle of a task that has lots of steps (such as cooking a meal), try to pause regularly and take a moment to think. Ask yourself What am I doing just now? Where am I up to in my plan? Should I still be doing this task or should I have moved onto another task? Remember to STOP and THINK.

- Try to use a system of organisation that is familiar to you, or that you have used in the past. You are more likely to stick to it this way.

Flexible thinking

- Where possible, try to make back-up plans in advance and write these down so that you are prepared if you need to change your plans. This can help a lot if you are under pressure during a task and have to change plans at short notice.

- Try to break larger tasks up into different stages so that you can focus on one thing at a time. For instance, cooking one part of a dinner and then keeping it warm in an oven while focusing on cooking the next part of it.

- Talk through plans with others so that they can help you to think about situations that might involve a change of plan and how you will deal with this.

Planning

- Use a step-by-step approach, dividing activities into manageable ‘chunks’, and make a list of each step.
- Use checklists and tick off each part of the activity you have completed. This can help you to stay on track.
- Allow yourself plenty of time to plan activities and record your plans, using things such as calendars, diaries, alarms and mobile phones to make notes, lists and set reminders.
- Mentally rehearse your plans.
- Discuss your plans for the rest of the day with others; they can help you to stay on track with your planned activities.
- Prepare a weekly routine for tasks like shopping, washing and tidying the house. For example, knowing that Monday is a shopping day might make it easier to plan ahead, such as writing out a shopping list on the Sunday.
- Try to make back-up plans in advance so that you are better prepared if problems come up.

General tips

- Tell others about how you are feeling, what you are struggling with and how they can help. You can suggest practical ways they can help, or just remind them to be patient and understanding with you. You can show them this publication if it helps to explain some of your areas of difficulty. Remember that executive dysfunction is not ‘visible’ to others, so it will be hard for others to understand your experiences unless you talk to them about it.
- Be aware that fatigue can worsen many of the effects of brain injury. Try to get enough rest and manage your fatigue if possible - more guidance on this is available in our publication *Fatigue after brain injury*.

- If you are struggling at work, talk to your employer or about ways in which you can feel better supported.

- Complete tasks in a distraction-free environment where possible so that you can stay focused. For example, if you have young children in the house, it may help to save important tasks for when they are at school or out of the house so that you can better focus on what needs to be done.

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We hope that this has been a helpful resource. Please consider sharing your feedback with us by scanning the QR code or by visiting our publication feedback survey https://uk.surveymonkey.com/r/hwpublications.

This information was last reviewed in 2025.

We're here to listen.

If you need support, or have a question about brain injury, contact our free nurse-led helpline:

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