

EXECUTIVE FUNCTIONING AFTER ACQUIRED BRAIN INJURY

AND HOW TO HELP

INTRODUCTION

Acquired Brain Injury (ABI) is the term to describe an injury to the brain that you were not born with. ABI and recovery are experienced differently by everyone. The team at P.A.U.L For Brain Recovery want to support you during this difficult time and help you understand how an ABI may affect your life and how to manage the changes that occur. This booklet will specifically focus on changes to a person's executive functioning skills.

After reading this booklet, we hope to give you a better understanding of the executive functioning changes that may occur after sustaining an ABI, and how these can be best managed with the support of health professionals, P.A.U.L For Brain Recovery and the wider community. The booklet provides guidance for those experiencing executive functioning difficulties, but can also be used to inform friends or family members of those affected by ABI.



The Impact of Acquired Brain Injury on Executive Functioning

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What is executive functioning?

The term 'executive functioning' is often used as a simple phrase that includes a lot of different skills, such as:

- **Processing and understanding information**
- **Focusing and concentrating on tasks**
- **Understanding and managing feelings (often called 'emotional regulation', or when it is difficult after brain injury, 'emotional lability')**
- **Making plans, and then having the incentive, motivation and awareness to action tasks (often called 'initiation')**
- **Managing more than one task at a time while being aware of yourself and how you are managing the tasks (often called 'multitasking')**
- **The ability to alter plans to suit a change in circumstances (often called 'mental flexibility')**
- **Working out how to solve problems by using reasoning skills**
- **Learning and understanding what is socially acceptable and how to behave appropriately around other people**
- **Following social rules and being able to control inappropriate behaviour (often called 'inhibition')**
- **Being able to weigh-up options and choose the best option when faced with a choice**

Executive functioning helps our abilities to learn and understand new information, join information together with old information, and organise our thoughts to make plans or solve problems. Our executive functioning skills help us manage and plan how we go about our daily life, as well as handling new, complex or changing situations.

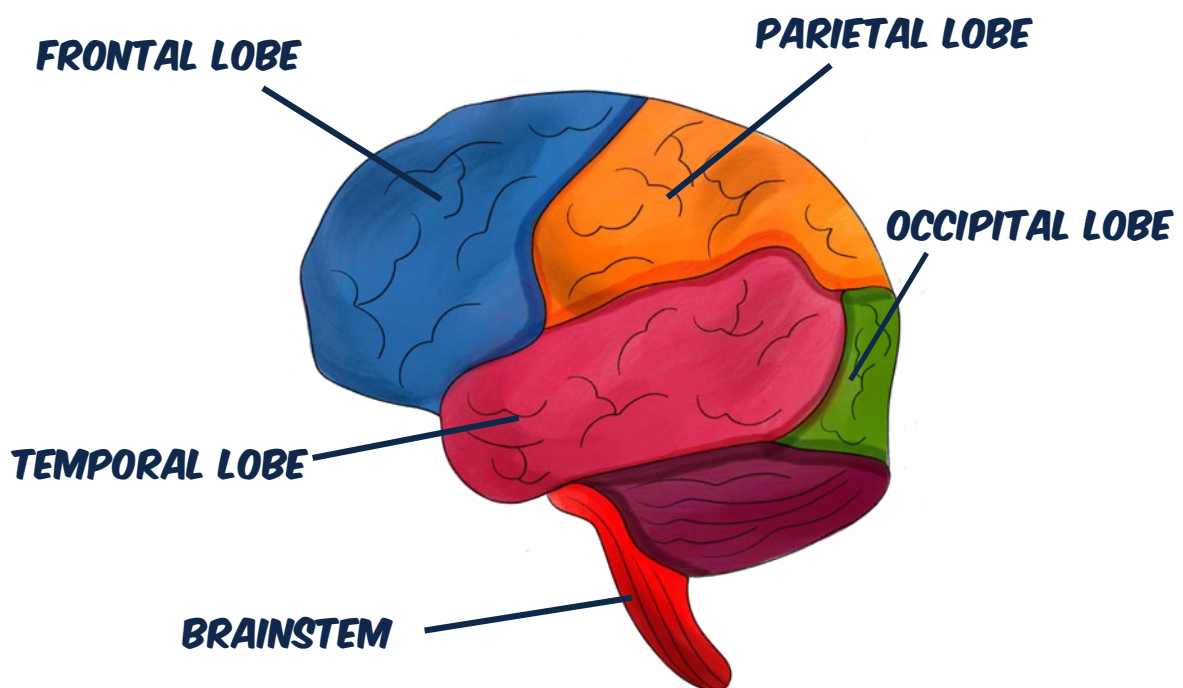
Everyday examples that involve executive functioning are things such as cooking a meal, shopping for groceries, and attending appointments. It also guides our self-awareness and social behaviour. The more complicated a task, the higher the level of executive functioning needed.

Difficulties with executive functioning can have a big impact on your life. Daily tasks can become more difficult and emotions can become more confusing. This may leave you feeling frightened and frustrated, as you may not notice changes in yourself but see people treating you differently, or you may notice changes in how you think and behave but struggle to understand them.

Patience, support and encouragement is needed during your recovery, as it can be a long process.

Why and how can brain injury change my executive functioning abilities?

Brain injury effects everyone is different ways and to different levels. Difficulties with executive functioning following brain injury is most often noticed in people who have had an injury to the front of their brain (behind the eyes and forehead; the frontal lobe of the brain).



However, as executive functioning is a very complex combination of skills, it often involves lots of areas of the brain. Some people may experience very big changes, in many aspects of their daily life and independence; while others may notice mild or subtle changes or only very specific difficulties more closely linked to injury to specific areas of the brain.



Common Executive Functioning Difficulties

You may have noticed some changes in your:

PROCESSING INFORMATION – You may find it's more difficult to organise multiple thoughts in your head or easier to feel overloaded with information. Often after brain injury our thinking speed is slowed down and we, or those around us, notice it takes more time to consider questions or think about more complex tasks. This can cause people to feel frustrated and angry.

AWARENESS AND INSIGHT – Sometimes the brain is unable to understand that it is damaged due to the very nature of brain injury. When we break an arm for instance, the arm sends signals to the brain to inform the brain of the damage and create a plan on how to manage the injury; however, the brain is sometimes unable to send signals to itself to share awareness of its own injury. This can cause a person to struggle recognising they have a brain injury (particularly in the absence of external physical signs, such as bleeding), and make it harder to be aware of how they are different, or what support they may need.

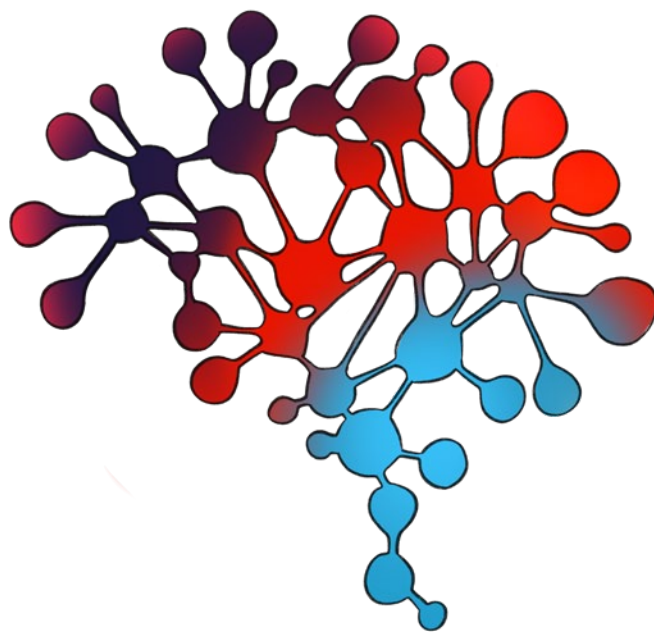
PLANNING AND ORGANISING – You may notice it has become more difficult to plan for your day, schedule appointments or complete tasks that require multiple steps, such as cooking or baking. The more complicated the task, the more challenging it is, such as making a sandwich compared with a roast dinner; this is because there are more steps involved which require organisation with more complex tasks.

SOCIAL APPROPRIATENESS – Sometimes after brain injury we are more impulsive or less able to be considered in our thoughts, feelings and behaviour. This can mean we act in ways that are not usually considered socially appropriate. Others may feel the brain injured person is more selfish or cares less; this is not necessarily the situation, it is more a case of losing some of the social filters that once guided them.

These changes can be very upsetting as they may make you behave in ways that are new to you. You may find that you say and do things you wouldn't have before your brain injury, or you may find yourself becoming emotional more easily or quickly. Understanding that these problems are due to brain injury, and that the effects of your brain injury can be managed and eased is an important part of rehabilitation.

Rehabilitation and Neuroplasticity

Over time, our brain can adapt to the changes that occur from brain injury through a process called 'neuroplasticity'. 'Neuroplasticity' is what happens when the brain builds new links to replace those that may have been damaged. These new links allow the brain to re-learn what has been lost by forming alternative connections. Neuroplasticity requires you to attempt and repeat certain tasks in order to relearn them. The more a task is repeated, the easier it will become. It is important to remember that making mistakes is an integral component of learning and brain injury rehabilitation, as it helps to strengthen your neural pathways and knowledge.



Ways to help you manage your own executive functioning

The process of recovery can take time and you may discover a new sense of self along the way. There are many strategies you may find helpful to cope with the effects of executive functioning difficulties. For example:

TAKE TIME TO PLAN TASKS OR AN ACTIVITY. When organising your day, write a to-do list of what needs to be done and when. You may want to re-organise the list depending on the task's priority or time that it needs to be done. You could then perform them in order they are written and tick off completed tasks to help you keep organised.

ENSURE ACTIVITIES ARE 1) Prioritised 2) Planned and 3) Paced to protect against fatigue.

ALLOCATE MORE TIME to completing tasks and daily activities, especially tasks that are more complicated. Allow yourself time to make sense of new information and give yourself time to think things through. Perhaps write it out or ask questions, and identify when you are feeling saturated or overwhelmed, and take a break to 'digest' and process things.

BREAK DOWN DIFFICULT OR MORE COMPLEX ACTIVITIES into smaller steps. For example, instead of writing 'prepare lunch' you may find it helpful to write down what you need and how to make your lunch, like following a recipe.

WRITE DOWN YOUR GOALS and what you are planning to do to achieve certain goals, and use notes and reminders to help you get through the tasks in the right order and to stay on track. When deciding what steps you need to do to finish a task, it may be helpful to think of the end goal and work backwards.

CALENDARS, DIARIES, MOBILE PHONES AND HANDHELD DEVICES can help you structure your weekly or daily tasks into manageable chunks. Make sure that there is a good mix of simple and complicated tasks throughout each day and the week. It might help to have a fixed timetable to help establish routine and ease the amount of effort your brain needs to use.

Coping and
COMPENSATORY



Strategies

Made a Significant

Difference



to my life

- PAUL SPENCE



Ways to help you manage your own executive functioning

MANAGE YOUR ENERGY LEVELS AND TAKE RESTS. Noisy or busy environments use more energy from your brain, and when overstimulated or tired, problems with executive functioning can get worse. A good rest and sleep regime is essential as it helps the brain process and repair itself.

TAKING REGULAR EXERCISE IS BENEFICIAL TO GOOD BRAIN HEALTH. Exercise has been shown to help the brain build new connections, memories and seems to work best in conjunction with sleep. Be aware of managing your fatigue levels, make sure you still structure rest and stop before you feel tired.

ASK FOR HELP WHEN NEEDED AND TALK TO THOSE YOU TRUST. Brain injury can be a serious and complicated condition, and people may not notice the difficulties you are having if there are few external signs you have an injury. Asking for help means people can better understand you, and how best to support you, but also supports your recovery by challenging your brain at a pace that works for you.

LET PEOPLE KNOW YOU HAVE AN ACQUIRED BRAIN INJURY. Explain that one of the effects is finding it harder to act and behave as you used to or as they might expect. By doing so, it may help them to better understand your situation. This could prompt people to provide a more inclusive environment that adapts to your individual needs, such as in an education or work setting.

KEEP THE SPACE AROUND YOU AS CALM AS POSSIBLE. removing distractions and sources of stimulation (e.g. a TV on when having a conversation) will help you concentrate.

TRY TO PLAN IN ADVANCE. Life is not always predictable, but devising a plan or thinking about alternatives/solutions ahead of time can help you prepare for potentially difficult or stressful situations.

Part of rehabilitation requires self-help and support from others. This support can be from a family member, a friend or a group. For example, if you have an interest in walking, you could consider joining in with a local walking group. P.A.U.L For Brain Recovery and Hull and East Riding Citizens Advice Bureau group, Connect Well can give guidance on accessing local groups and other social activities, along with support with physical and emotional health. Organised group activities can help you develop goal setting, planning, time management, self-monitoring and adjusting your goals and plans depending on changing circumstances. Being part of a group provides you with the opportunity to recover social skills, by learning to summarise and explore your ideas, thoughts and feelings.



Coping with mood and emotional problems

There is a process of psychological adjustment and acceptance that comes with brain injury; learning about the 'new you', the changes you're facing, and sometimes the difficulty is regaining a sense of yourself again. This can take a long time, and it is often most helpful when people learn to adjust the situation around them to reduce distress, rather than try to change themselves after brain injury.

Executive functioning difficulties may make it harder to put things in perspective or let you reduce the anxiety or low mood you may feel. Having someone available to offer you a different perspective on how you are experiencing life may help you cope with your own feelings, see that they may be the result of your injury, and can be overcome.

Remember that your recovery, like these coping strategies, is a work in progress, and it is the difficulties with executive functioning that is causing the problems/distress, not your own lack of skills or willpower.

For more information on managing emotional and behavioural changes after brain injury, you can also refer to our other P.A.U.L For Brain Recovery information leaflets specifically about these areas.



How friends and family can help

There are also ways your family, friends and other significant people in your life can support the cognitive changes that have occurred after a brain injury. Here are some suggestions:

DEVELOPING AN UNDERSTANDING OF BRAIN INJURY and specifically changes in executive functioning after brain injury, is a key step to supporting a loved one with such difficulties. By the nature of brain injury, it can be difficult for the person to recognise and make sense of the changes, so educating yourself, in order to help develop understanding and support the loved one's self-awareness is fundamental. A good place to start is reading this leaflet together.

IF A FRIEND OR FAMILY MEMBER HAS NOTICED MOMENTS WHEN YOUR EMOTIONS, BEHAVIOURS OR THOUGHTS HAVE FELT LESS CONTROLLED or considered, it may be helpful to talk about these moments. It also helps if they can be available for future support if you can predict a similar challenging situation. It can help people recovering from brain injury to have someone who knows them well and who they trust, to help them better understand their difficulties and support needs.

A FRIEND OR FAMILY MEMBER CAN ALSO HELP PUT YOUR FEELINGS AND EMOTIONS IN PERSPECTIVE. Another voice, and another point of view, may help keep your emotions balanced and help you cope with social situations.

FOR PEOPLE WHO HAVE NOTICED A SLOWER THINKING SPEED, slow down conversations and do not overload them with lots of information or unfamiliar words/concepts. Allow your loved one more time to respond.

FRIENDS OR FAMILY MEMBERS CAN STAY AWARE OF DISTRACTORS for example, noises and situations that may be overwhelming for you, and help to reduce these as much as possible.



How friends and family can help

IF POSSIBLE, LET FRIENDS OR FAMILY MEMBERS TAKE ON SOME RESPONSIBILITIES that may be more cognitively demanding and make you feel overstimulated or drained afterwards (such as shopping).

THINK AHEAD ABOUT SITUATIONS (particularly more challenging, new or complex situations), and talk them through with your loved one. For example, plan and rehearse an upcoming event and what you/they need to think about and do. Preparation, such as planning what to wear, where to sit, and what to eat, can reduce the cognitive demands on the brain at the time.

This booklet aims to develop your understanding of changes in executive functioning after brain injury, helping you identify difficulties and provide initial strategies. You may find it helpful to explore particular areas in more detail. P.A.U.L For Brain Recovery has further literature on some of the elements discussed here, you can also talk to the team personally, or you may find it helpful to seek referrals to specific healthcare services.

FOCUS ON:

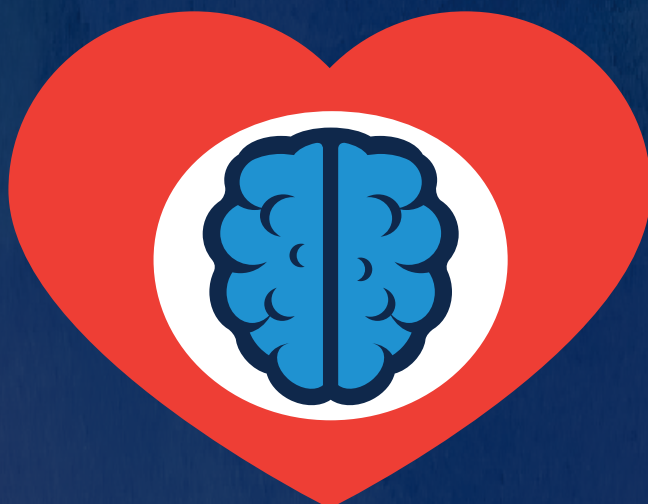
how far you've come

NOT

how far you have to go



Please get in touch if the charity can help you further with your recovery journey



P.A.U.LTM
For Brain Recovery

6-10 Story St, Hull HU1 3SA
www.paulforbrainrecovery.co.uk
01482 620229



@P.A.U.L For Brain Recovery

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