



## Difficulties with decision making after brain injury

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### Introduction

Having difficulty with making decisions is a common problem after acquired brain injury. It is one element of a broader set of mental skills that have been called 'executive functions' – these are the skills needed to enable us to deal with problems that arise in everyday life and to cope with new situations. Everyday life is full of situations in which we have to make decisions, some minor (which toothpaste will I buy? what will I have for dinner tonight?), some major (will I stay in this relationship? will I change my job?).

Decision making involves many different cognitive functions working together – long-term memory (how have I dealt with similar situations in the past? what choices have I made previously?), working memory (holding information in mind, thinking things through) and emotion (how important is this decision to me? how will the possible outcomes make me feel?) are all involved.

Because decision making involves a lot of different processes, this means that if any one of these processes is affected by brain injury, then decision making may be impaired. People are affected in different ways – some find it hard to make a decision at all, finding that even what seem like simple decisions, such as what toothpaste to buy, become almost impossible. Some people become impulsive, making hasty decisions, apparently acting without thinking things through. Poor judgement in relationships, with money or in business can have devastating consequences for the individual and their family. All of us, with or without brain injury, have difficulty making decisions from time to time, but brain injury can make this much more frequent.

### Decision making and following through with plans of action

For some people, a decision about a plan of action might be made, but it is difficult for the individual to follow through with the plan. It is as if a person's intention, or goal, becomes neglected. This can sometimes be because the person becomes distracted by other tasks or activities. The person 'forgets' to do things, not because what has to be done has been completely forgotten, but rather that it is difficult to keep the thing to be done in mind (e.g. take medication, go to appointments, give someone a message, carry out daily tasks, watch a favourite TV programme). This type of remembering is often called 'prospective



remembering'. It requires alertness to the plans for the day. Psychologists use the concept of a 'mental blackboard' to describe how we keep things we intend to do in mind (written on a mental blackboard). However, the difficulty can be that for a person after brain injury things are easily rubbed off a mental blackboard and temporarily 'forgotten'. Although the person may remember their intention when reminded.

## Self-awareness (Insight)

The cognitive problems that cause difficulties with decision making or prospective remembering may also make it difficult for an individual to be aware of their problems. This can be difficult for the person and his or her family and friends and cause conflict. The brain injured person may show what may be considered by others as bad judgement and they may fail to achieve important tasks. However, they may not be aware of these difficulties or share the opinion of those judging this as a difficulty. So, one of the first challenges to overcome is related to the need for the individual to achieve a degree of self-awareness and understanding of the problems they are experiencing. This may require sensitive feedback from family, friends or professionals and for the individual to *want* to learn about possible solutions.

## Rehabilitation

Working out how to improve the ability to make decisions, to be better at solving problems, planning, following through with plans, and remembering to do things can be challenging and may be best done with the help of a professional such as an occupational therapist or clinical psychologist. The first step in rehabilitation is understanding the problem, but with something as complex as decision making or problem solving difficulties this may not be straightforward, which is why the help of a professional may be important.

For some people learning to manage impulsivity is important – developing a habit of often stopping and thinking, even if just briefly, about what you are doing and what you have to do can help to interrupt a tendency to act without thinking. The idea is that people become better at using 'self-talk', regulating their own actions or behaviour.

In Goal Management Training people learn to be better at being clear what it is they are trying to achieve, at working out and keeping in mind the steps needed to achieve the goal and then regularly checking their mental blackboard to make sure that important tasks are kept in mind. A study by researchers in Cambridge and Glasgow showed that goal management training, combined with SMS text message reminders to check the mental blackboard, helped people with brain injury to remember to carry out a task (making a phone call to a voicemail service) that had to be done four times a day at specific times.



Goal management is also discussed in Trevor Powell's 'Head Injury – A Practical Guide'. He suggests individuals should "Try to create structure out of unstructured situations. Set yourself goals and break these down into specific tasks so that you know what you have to do. Use Checklists (p86)". There is some more information available in Trevor's book, which can be purchased from Headway.

Although written primarily with the education environment in mind, there is also a very helpful web-site resource prepared by a leading practitioner in the US, Dr Mark Ylvisaker: <http://www.projectlearnnet.org/tutorials.html>

One extract from this includes the following general 'script' that an individual can learn to ask themselves....

**GOAL:** What's the goal? What are you trying to achieve? What do you want to have happen? What's it going to look like when you're done?

**OBSTACLE:** What is standing or could stand in the way of you achieving the goal? What is the problem?

**PLAN:** So what's the plan? What do you need to do? Can you write out a checklist? Do you need help to list the steps? Do you need help for any one of the steps? Do you want to do it as a team? Do you think that plan will work?

**PREDICTION:** So how well do you think you will do? How many can you get done? On a scale of 1 to 10, how well will you do?

**DO:** [Perhaps solving problems along the way or revising the plan]

**REVIEW:** So how'd it work out? What worked? Anything that didn't work? Why or why not? What are you going to try next time?

It is important to edit the script to suit the individual, the language they prefer to use and their needs.

## External aids

External aids such as diaries, notebooks, wall charts and calendars are invaluable for people with memory impairment. Also, electronic watches, mobile phones, pagers and tablet computers can all be set to provide reminders and cues to do specific tasks, or to check a daily planner. It isn't always easy for someone with memory difficulties to use these aids so the help of a relative/carer or occupational therapist may be needed. For more information see the Headway booklet *Memory Problems after Brain Injury*.



Another reminding system that has been shown to be useful for remembering to do things is NeuroPage.

## **NeuroPage**

Neuropage is a service provided by the Oliver Zangwill Centre in Ely. It uses a simple pager worn by the person with the memory/planning impairment to provide reminders of things to do and other information. The impaired person, or a relative/carer, provides a list of reminders that are entered on to computer by staff at the centre. This computer then automatically sends out the message to the person's pager at the correct time. The pager beeps or vibrates and the person receives their message. This simple system has been shown through extensive research to be effective in helping people with executive and memory problems arising from a wide range of conditions. In conjunction with a checklist, there is good evidence that using a device such as NeuroPage can enable individuals to complete a wide range of complex and personally meaningful tasks.

For more information on the Neuropage service, including details of cost, please contact:

The NeuroPage Service  
Oliver Zangwill Centre  
Princess of Wales Hospital  
Lynn Road  
Ely CB6 1DN  
Tel: 01353 652173  
Email: [janet.beveridge@ozc.nhs.uk](mailto:janet.beveridge@ozc.nhs.uk)  
[www.neuropage.nhs.uk](http://www.neuropage.nhs.uk)

A list of Neuropage research publications is available at <http://www.neuropage.nhs.uk/>

## **Further help**

Sometimes an individual needs training to be able to overcome the difficulties described in this factsheet. In these circumstances it is appropriate to seek the advice of an Occupational Therapist, Clinical Psychologist or Clinical Neuropsychologist. Talk to your GP about how to access further support in your area.



Headway sells several books and produces an extensive range of booklets and factsheets covering the problems that brain injury can cause. To order books and booklets visit [www.headway.org.uk/shop.aspx](http://www.headway.org.uk/shop.aspx). Factsheets are freely downloadable at [www.headway.org.uk/Factsheets.aspx](http://www.headway.org.uk/Factsheets.aspx).

Brain injury survivors and carers can receive free copies of appropriate booklets from the helpline.

Headway's Amazon shop also sells a wide range of books on the subjects of brain injury and brain function. Visit [www.headway.org.uk/headway-amazon-shop.aspx](http://www.headway.org.uk/headway-amazon-shop.aspx).

For definitions of the technical terms in this factsheet, see the 'Common brain injury terms' section of the website at [www.headway.org.uk/common-brain-injury-terms.aspx](http://www.headway.org.uk/common-brain-injury-terms.aspx).

**If you would like to discuss any of the issues covered here, or any other aspects of brain injury, please call our free, confidential helpline on 0808 800 2244. Alternatively, you can email us on [helpline@headway.org.uk](mailto:helpline@headway.org.uk).**



## About Headway

Headway - the brain injury association is a charity set up to give help and support to people affected by brain injury.

A network of local Headway Groups and Branches throughout the UK offers a wide range of services including rehabilitation programmes, carer support, social re-integration, community outreach and respite care.

The Headway helpline provides information, advises on sources of support, finds local rehabilitation services and offers a listening ear to those experiencing problems.

Other services provided by Headway include:

- Supporting and developing local Groups and Branches
- Promoting understanding of brain injury and its effects
- Producing a range of publications on aspects of brain injury
- Lobbying for better support and resources to be made available by statutory health and social care providers
- Campaigning for measures that will reduce the incidence of brain injury
- Accreditation of UK care providers through the Approved Provider scheme

## Make a donation

I wish to help Headway - the brain injury association to improve life after brain injury by making a donation £

### Your personal details

Mr/Mrs/Miss/Ms  Full name

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### Your payment details

I enclose my cheque for £  made payable to Headway - the brain injury association

Please debit my Visa / Mastercard / Diners / Maestro card number:  Security code\*:  \*3 digits on reverse of card

Expiry date: / /  Start date: / /  Issue no. (Maestro only):

We (Headway - the brain injury association) hold the information you supply to us on our database. From time to time we may send you information regarding other services and products we provide. If you do not wish to receive such information, please tick this box.  Please tick this box if you do not want a receipt

### Gift Aid

*giftaid it* Gift Aid will increase the value of your donation by 25% at no extra cost to you. Please tick the Gift Aid box below if you want Headway to reclaim the tax you have paid on your donations since 6th April 2008 and any future donations you make. Please note that you must pay an amount of income tax or capital gains tax at least equal to the amount we can reclaim on your donation in any tax year.

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### Donate by phone or online

- To make a donation by phone, call: **0115 924 0800**
- To make a donation online visit: **[www.headway.org.uk](http://www.headway.org.uk)**

**Completed forms should be sent to:** The Fundraising Team, Headway - the brain injury association, FREEPOST RSGU-CSKS-CSJS, Bradbury House, 190 Bagnall Road, Old Basford, Nottingham, NG6 8SF