Memory impairment is one of the most common effects of acquired brain injury. Sadly there are no cures available, but there are a number of ways of coping and making life easier. It is important to remember that using the strategies described here is not ‘cheating’ and will in no way prevent natural recovery or cause existing skills to be lost.

This factsheet is designed to provide basic, practical suggestions on coping with memory problems and making the most of memory. The first main section outlines ways of adapting the environment and lifestyle in order to minimise the impact of memory problems. The second main section deals with techniques and strategies which can help people to make the most of their existing memory and to store and recall information more efficiently.

There are five main ways described here to make life easier:

1. Adapting the environment
2. Using external memory aids
3. Following a set routine
4. Combining several strategies to make a substitute ‘memory system’
5. Improving general well-being

The rest of this section will provide suggestions for each of these categories.

1. Adapting the environment

One of the simplest ways to help people with memory problems is to adapt their environment so they rely on memory less. Some ideas for doing so which have helped others are:

- Keeping a notepad by the phone to make a note of phone calls and messages
2. Using external memory aids

Many people use external memory aids, regardless of whether they have a brain injury or not. External memory aids are particularly important for people with memory problems as they limit the work the memory has to do.

At the end of this factsheet there is a list of useful websites where you can buy memory aids.

Some examples of external memory aids you could try include:

- Smartphones and diary or calendar applications
- Diaries, filofaxes or datebooks
- Notebooks
- Lists
- Alarm clocks
- Watches
- Calendars
- Wall charts
- Tape recorders and Dictaphones
- Electronic organisers
- Pagers
- Pill reminder boxes for medication
- Sticky-backed notes
- Photo albums
- Cameras

3. Following a set routine

Having a daily and weekly routine means that people with memory problems can get used to what to expect, which helps to reduce the demands on memory. Changes in routine are
often necessary, but can be confusing. It is a good idea for relatives and carers to explain any changes in routine carefully and prepare the person with memory problems well in advance, giving plenty of spoken and written reminders. You could also try the following reminder strategies in order to establish routines:

- Make a note of regular activities in a diary or on a calendar
- Make a chart of regular events, perhaps using pictures or photographs, on a noticeboard

4. Combining several strategies to make a substitute memory system

Most people with memory problems find it useful to combine several aids and strategies. A combination of two or three strategies can cover the areas where there would otherwise be problems and provide a safety net for things that must be remembered.

Here are examples of the components of two such ‘combination systems’:

System one:

- Three lists – one showing routine tasks, one showing where to find files in the filing cabinet and showing key ‘rules, such as when to do the filing each day
- A ring binder with sections on ‘urgent tasks’ and ‘long-term projects’
- A notebook
- A telephone message pad to make notes of conversations
- A computer calendar and alarm
- Practising assertiveness techniques to ‘buy time’ instead of having to respond to requests immediately
- Simple relaxation and breathing techniques to reduce anxiety

System two:

- Filofax
- Journal
- Watch
- Dictaphone
- Various lists
- Sticky-backed notes
- Menu chart
- Keeping things in the same place
- Following routines
Memory is very important in giving us a sense of our own identity. Memory problems often have major emotional effects, including feelings of loss and anger and increased levels of depression and anxiety.

Some approaches to dealing with this are as follows:

- Follow the strategies outlined earlier in this factsheet. They can provide a measure of control which can relieve anxiety and depression.
- Share your feelings with others. People with memory problems often find that talking to people who understand their problems can provide relief and reassurance. Headway Groups and Branches can be an excellent source of support and details of how to find your local service are provided at the end of this factsheet.
- Identify activities you find enjoyable and relaxing, such as listening to music or exercising, and take the time to indulge in them.

Although there is no way of restoring lost memory capabilities, it is sometimes possible to make memory more efficient. There are some techniques that can help the following aspects of memory:

1. Getting information into memory more efficiently
2. Storing information more efficiently
3. Recalling information more efficiently

In order to remember something we must get the information into memory first before it can be stored away. This can be very difficult after brain injury, especially for someone who has difficulties with attention and concentration.

Some simple rules to follow when giving information to someone with memory impairment are:

- Concentrate on relevant material that the person wants or needs to remember
- Simplify information and written instructions
- Reduce the amount of information that has to be remembered and just concentrate on the essentials
• Divide the information into **small chunks**
• Give the chunks **one at a time**
• Encourage the person to take their time and **pay close attention**
• Ensure that the information has been understood by having the person **repeat it back** in his or her own words
• Encourage the person to **make associations** by linking the new information to something that is already familiar
• Use the **little and often** rule – it is better to work for a few minutes several times a day than for a longer period once a day
• Encourage the person to **organise** the information – for example, grouping items on a shopping list into distinct categories
• Use **two or three different methods** to improve learning of one piece of information – for example, if you want to teach someone with memory impairment the way to the local shops, you could: (a) draw a map; (b) describe the way verbally; and (c) accompany the person along the route
• Choose a **good time to practise** – information will be taken in more efficiently when the person is fresh and alert

There are three further main systems used in order to get information into memory efficiently. These are: **errorless learning; mnemonics;** and **PQRST**.

**Errorless learning**
While many people learn from their mistakes this is not the case with people with memory impairment, who tend to repeat the same mistakes as they cannot remember making them. This can be very frustrating and a more efficient approach is to prevent memory impaired people from making mistakes when learning new information. This approach is known as ‘errorless learning’.

One way to do this is to guide the person with memory impairments through a task several times and then gradually decrease the amount of help given. Alternatively, provide written instructions to follow and then gradually decrease the amount (e.g. by missing a word out here and there).

The following steps can be used as part of an errorless learning programme for use with someone with memory impairments:

• **Adjust your expectations**: Don’t ask for responses until you are at least 90% sure the person will give a correct response.
• **Make sure the person is completely clear what is expected of them**: If they don’t understand what they have to do in the first place then mistakes are inevitable.
• **Complete the task together**: Saying, “let’s do this together” is a better way of
starting an activity than, “let’s see if you can do this.”

- **Make the task do-able**: This can be done by breaking the task down into smaller parts and teaching the parts separately.
- **Anticipate problems and correct in advance**: For example, if the person is reading and there is a difficult word coming up, anticipate this by saying something like, “I see a tricky word in the next sentence. The word is...let me know if you need help when you get to that word.”
- **Provide cues**: This can be an entire answer, for example, “I think the answer is 22. What do you think?” It could also be a sentence completion cue, for example, “The president at the time was Abraham ... That’s right, Lincoln.”
- **Ensure large amounts of successful repetitions**: This will reinforce the new knowledge and help with retention.

Errorless learning can be a difficult technique to use without training. If the person with memory problems is working with a neuropsychologist they will be able to advise as they will be trained to use the method. There is also an excellent tutorial and video on the subject on the Brain Injury Association of New York State’s LEARNet project website at [www.projectlearnet.org](http://www.projectlearnet.org).

**Mnemonics**

Mnemonics are verbal and visual aids to learning, such as sayings, rhymes or drawings, which help us to remember things more easily. For example, the rhyme ‘Thirty days in September...’ helps us to remember the number of days in each month and the sentence ‘Richard of York Gives Battle in Vain’ is a reminder of the colours of the rainbow.

Mnemonics can help people with memory impairments. For example, one memory impaired woman learned to remember the name Stephanie as a picture of a step and a knee. However, it is unrealistic to expect them to devise and remember to use them themselves. For this reason, the following guidelines for relatives and carers might help:

- Devise the mnemonic yourself and then teach it to the person with memory impairment
- Use mnemonics to teach a specific piece of information, such as people’s names or addresses
- Take account of individual preferences and styles – not everybody likes the same strategy

**PQRST**

This is a way of helping yourself to remember something you are reading, such as a newspaper article. This can be very useful for anyone to try as well as people with brain injury.
PQRST stands for:

- **Preview** – scan the information to get a general idea of the content
- **Question** – identify some questions you want to be able to answer after you’ve read it and write them down
- **Read** – read the material closely
- **State** – repeat the main points to yourself by stating them in summary form
- **Test** – test your knowledge by seeing if you can answer the questions you wrote down earlier

### 2. Storing information more efficiently

New information is most likely to be forgotten within a relatively short time after it is learned. The rate of forgetting slows down after this initial period.

Once information has been taken into memory, it helps to practise or rehearse it every so often. This is best done by testing immediately after learning, then testing again after a slight delay, then again after a slightly longer delay and so on. This process is known as ‘expanding rehearsal’.

For people with memory impairments the intervals used should be very short, as immediate memory is usually relatively undamaged so needs to be taken advantage of. You could start by asking the person to repeat the information immediately, then after two seconds, four seconds, eight seconds, etc.

### 3. Retrieving information more efficiently

Often information is stored in memory but retrieving it can be difficult. We have all experienced this as the ‘tip-of-the-tongue’ effect. Retrieving information can be particularly difficult for people with memory impairment after brain injury. However, the following techniques can help:

- Provide a cue or prompt, for example, the first letter of a name.
- It is much easier to remember something if recalling it in the same location, situation or mood as when the information was learned. In order to avoid the limitations this can place on memory, it is a good idea to learn new information in a variety of situations and settings whenever possible.
Conclusion

Following the strategies and techniques described should help most people to compensate for memory problems, at least to some degree. However, it must be recognised that they do not offer a cure. In order to help someone with memory impairment, these approaches should be adopted for specific purposes and in a gradual, step-by-step sequence.

It is important to try different things to see what the individual finds most suitable. The ideas should be used according to individual preference and can be adapted in any way that people find suits them. Ideally, they should be enjoyable and can be a shared activity with family and friends.

This factsheet is adapted from the book *Coping with Memory Problems: A practical guide for people with memory impairments, their relatives, friends and carers*, with kind permission of Pearson Assessment. The book is available from www.headway.org.uk/shop.aspx, as is the Headway booklet *Memory problems after brain injury*. Alternatively, call 0115 924 0800 to order.

To discuss any issues raised in this factsheet, or to find details of our local groups and branches, please contact the Headway helpline free of charge on 0808 800 2244 (Monday - Friday, 9am-5pm) or by email at helpline@headway.org.uk.

You can also find more information and contact details of groups and branches on our website at www.headway.org.uk/supporting-you.
Memory aids suppliers

The following list is not exhaustive and there are many other suppliers of memory aids, such as regular high-street shops. Headway does not endorse any of the products on these sites. Some websites may expire over time.

- www.bindependent.com (medication reminder alarms, etc)
- www.epill.com (medication reminder alarms, etc)
- www.enablingdevices.com (vibration cuing devices, etc)
- www.qedonline.co.uk (voice recorders and alarm devices)
- www.medicalarm.co.uk (alarm watches and pill-boxes)
- www.independentliving.com (medication reminder alarms, etc)
- www.talkingproducts.co.uk (voice recorders and related products)
- www.neuropage.nhs.uk (paging system for people with memory impairments)
- www.timestrip.com (smart labels that monitor elapsed time)
- www.loc8tor.com (location detection devices)
- www.keyringer.com (location detector devices)
- www.alzstore.com (wide range of memory aid products)
- www.ablelinktech.com (specially designed hand held devices for memory problems)