

PATIENT INFORMATION

Managing Memory Problems

Patient Information and Self- Management

Using this Booklet

Having a memory problem is frustrating and for some people it can cause significant anxiety. There are many reasons why your memory may not be as good as it was, but whatever the cause there are ways that you can learn to work round it. In this booklet you will find a brief explanation of how the memory functions and different approaches that may help with particular memory problems. Not all of these strategies will suit you but we know from research that people are usually able to find a couple of techniques that fits with their lifestyle.

The most important thing is to not be critical of yourself, the more resources you spend on being critical of yourself, the fewer there are for your brain to use in remembering information. It is also very important for friends and relatives to be understanding and to not say things such as "I just told you that". At the end of the booklet you will find a section on Errorless Learning which is particularly aimed at family and friends.

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Types of Memory – Why can I remember some things and not others?

You may have noticed that whilst you forget people's names, you are still able to remember how to make a cup of tea. This is because there is more than one type of memory.

1. Short term memory

This is for information that we do not have to remember for more than a few seconds, for example dialling a telephone number. Short term memory is also known as working memory, but for the purposes of simplicity we will refer to it as short term memory in this booklet.

2. Long Term Memory

How long is long term? Long term memory does not just refer to things that have happened many years ago. In fact long term memory is divided up into 3 time periods:

- **Delayed memory:**
This is memory for information or events that have happened in the previous few minutes.
- **Recent memory:**
This is memory for events that have happened in the previous couple of weeks.
- **Remote memory:**
This is memory for events that have happened years ago, such as your first job or being at school.

Long term memory is also classified by the type of information being remembered:

Episodic memory – this is a *personal* memory for events in our lives, such as being at school, or very recent events such as what we had for breakfast. Episodic memory is like our own personal diary.

Semantic memory – this is information about the world around us, such as the name of the Prime Minister, or knowing that a cat has four legs. It includes all the facts and figures that we have learned through formal education or experience.

3. Procedural memory – this is the ability to remember how to do something such as driving or swimming.

4. Prospective memory – this is remembering to do something in the future, such as keeping an appointment.

What is a memory?

There are several areas of the brain involved in memory, again that is why some types of memory are affected by illness and others are not. The brain uses a combination of chemical and electrical activity to send information around itself and to the rest of the body. A memory is best described as a particular pattern of electro-chemical connections within the brain.



Why do we forget?

Forgetting is the inability to retrieve information when we need it. There are 2 theories of why we forget. One is that the pattern of connections fades over time, but the other is that new information interferes with the original pattern.

Forgetting is a normal aspect of memory. However, when memory problems begin to interfere with your everyday living, more active strategies are needed to help you manage.

What can I do to help my memory?

There are four ways you can help your memory:

1. **Change how you use your memory.**

You can use techniques to help you learn information more efficiently and retrieve it better.

2. **Change your environment so that it is more memory friendly.**

For example, you can label cupboards with their contents. You can put up a hook by the front door for your keys.

3. **Change your behaviour.**

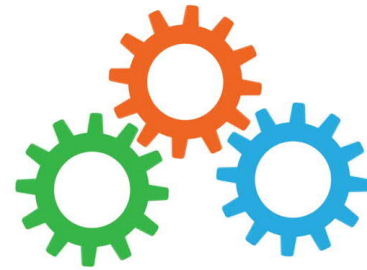
Keeping to routines is very important for your memory, for example, make sure items are always put back in the same place; always take your medication at the same time each day.

4. **Use memory aids.**

Memory aids include items such as mobile phones, diaries, calendars and noticeboards.

How Memory Works

When you use your memory your brain goes through three processes.



Registering

The first stage is when we see or hear information for the first time and it registers in our brain. This is known as **registering** or **encoding**. Information that is very dramatic may be encoded very fast, for example seeing a car accident. Other information may take more effort such as learning an address. Obviously if you do not take in or register the information then you will not be able to remember it.

Storing

Once information has been encoded it has to be stored. The memory store can be imagined like a giant filing cabinet, with different sections for different sorts of memory.

Even if you successfully register information, sometimes it is not stored correctly. If you are trying to remember two things at once for example, you may find that they get muddled up when you try and remember them. It is like mixing up papers inside the filing cabinet.

Retrieving

Finally information has to be retrieved from the memory store, this is like opening a draw of the cabinet and taking out the file you need. However, we all know that even with good filing systems sometimes we just do not seem able to find the information we want. We know it's in there, we just don't know where. This is similar to the experience we have when we know that we did learn the information but we just cannot recall it. People talk about words being on "the tip of their tongue". Usually if we stop trying to pressurise ourselves to remember at that exact moment it will come back to us later on.

So using our memory looks like this:



Problems and Solutions

Memory problems can occur at every stage of the process. We will look at each of the stages in more detail.

Registering Information

We use our senses to take in information from the world around us. Sight and hearing are probably the two senses we use most for registering information. Memories are largely composed of images, sounds and words. Taking in information can be disrupted by the following:



- Poor eyesight
- Poor hearing
- Poor concentration
- Tiredness
- Anxiety
- Feeling low

If you cannot hear what is being said to you, it is hardly surprising that you cannot remember it. If you have problems with hearing or vision, you need to try and do what you can to deal with these first.

Help with Registering

- Ask people to speak up if you cannot hear.
- One of the best ways to improve encoding is to use unusual images or humour when you are learning information.
- Put extra effort into thinking about what you are hearing or seeing.

Storing Information

Although we do not know exactly how our memory store works, it seems that there are two memory stores, one for short-term memory and one for long term memory. The short-term memory store has a very limited capacity, both in terms of the quantity of information it can hold and also the time it can hold it in store. Information in the short term store has to be used quickly or repeatedly rehearsed until it is needed. The long term store has no known limits. Information that is required for future use can pass from the short-term store to the long-term store.



Help with storing

- Concentrate on the parts of information that have important meaning for you.
- Do not try to do two things at once, for example do not have the TV on when you are trying to listen to something you need to remember.

Retrieving Information

There are 2 ways of retrieving information. First you can simply recall it when you want it; secondly you can recognise it.

If you can recognise a word which you could not recall this demonstrates that the word was actually stored in your memory, but you could not produce it. Sometimes you may find that you can partially remember something, like knowing somebody's name begins with "S" or remembering words that are close in meaning to the word you want.

Help with Retrieving

- Try and provide yourself with **cues** for recalling information. For example, if you think that the word you are looking for begins with D, search your memory for all words in that category beginning with the letter D.
- If you are not sure of the first letter, go through the alphabet starting with A.
- When trying to retrieve memories for personal events try and reconstruct the **context** of the event you are trying to remember. For example, if you want to recall the name of a friend, think back to when and where you met them. Can you visualise any scenes of being with that friend?
- Use **mnemonic** strategies. A mnemonic takes the first letter of the words you want to remember and puts them into a sentence (for example, **R**ichard **O**f **Y**ork **G**ave **B**attle **I**n **V**ain for the colours of the rainbow; **R**ed, **O**range, **Y**ellow, **G**reen, **B**lue, **I**ndigo, **V**iolet). Sentences are well encoded in the memory and act as a prompt to retrieve the rest of the information.
- **Mental walks.** This method was used by Greek and Roman orators to help them remember the order of topics in long speeches. Mentally place the items you need to remember in a well known location, such as buildings along a street, stops on the bus, or rooms of your house. Then take a mental walk along your route and you will be able to recall the items.



Activity

Practising mental walks.

You are going to remember a shopping list by imagining you are putting them in different rooms of your house. The items are:

Bread

Butter

Potatoes

Chicken

Bag of peas

Toilet roll

Oranges



Now imagine the rooms of your house. Think really carefully about the furniture and colours of each room.

First open the front door and notice a loaf of bread on the floor. Then go into the lounge. There is a packet of butter on the sofa and a bag of potatoes in front of the television. You come out of the lounge and go into the bedroom. You notice a bag of peas on your pillow. Open the wardrobe door. In the wardrobe there is a pile of toilet rolls. You go out of the bedroom and into the bathroom and you find a chicken sitting on the toilet. Finally you come out of the bathroom and into the kitchen and on the table are some oranges.

Using the images in your head, write down as many items as you can from your shopping list

Ideas to try at Home

1. Make up a mnemonic for a list of things you need to remember. This could be a shopping list or jobs you have to do on a particular day.
2. Use the mental walk technique to remember a list of friends.
3. Next time you listen to the news or read the paper, notice what things you remember. Ask yourself why this might be and what particular meaning those things have for you.

Names, Faces and Places

Names and Faces

It is common to recognise a face, but not remember a name. To help with remembering names you need to think back to the three stages of memory; registering, storing, retrieving. We will consider each of them below.



Registering

- Remember, your senses are first part of your memory. So when you meet someone for the first time **listen** carefully.
- **Look** closely at their face. What features are distinguishing? Make a visual image of the person with their name attached. If someone has a large nose, think “Steve Smith – nose”
- The more **humorous** the image, the better it will be recalled. Novel or bizarre images register well in memory.
- Can you make an image associated with the sound or meaning of their name? For example Steve Smith in a smithy with bright red nose, heated by the fire.
- Rhymes are a good way to learn information. Again try and match the rhyme to the person, for example if you meet a cheerful woman called Marie try and remember her as “Marie is full of glee”; “Claire has curly hair”.
- If you need to remember first name and surname, make a short word from the 2 initials, e.g. Mary Carter – Mac and imagine someone wearing a hood.
- Ask people about themselves. It is easier to remember things in which we are interested.

Storing

- Rehearsal helps to “lock” the name into your memory store; so try and use a name as soon as possible after hearing it.

Rehearsal can also be useful in improving your memory for people you already know.

Activity

With your partner, write down on a piece of paper a list of close friends or family that you want to remember.



Use the techniques listed under Registering to build up an image of each person. This might be something to do with their name, or what they do, or their relationship to you.

Read through the list and give it to your partner.

Now try and recall as many of the names as you can. After a couple of minutes, have another look at the list. Now try again.

The technique above is called **spaced retrieval**.

In spaced retrieval you rehearse information; then retrieve it; then pause and then repeat. Each time you increase the amount of time between rehearsing and retrieval

Retrieving

Try to recall where you first met someone. What was the occasion? Is the person connected with leisure activities or clubs or are they someone you might have worked with? Have you met them in a professional capacity, such as the receptionist at the GP surgery?

First letter cueing. Go through the letters of the alphabet and ask yourself if the person's name begins with that letter. Try a few names with each letter of the alphabet, to see if it triggers your memory.

And if all else fails.....

We all forget names, however good our memory is. Do not feel ashamed to ask. You can say "I do know you, but would you believe it I can't remember your name. My memory just isn't as good as it used to be. Just remind me what it is."

Places

Have you been out in town recently and suddenly felt unsure of where you were? Perhaps you could not remember which bus stop you needed or the route to a shop.

In our memory we hold a “map” of familiar places. Memory difficulties can prevent us accessing our maps.

Finding your way around outside

- If parking in a large car park, pay attention to the position of the car in relation to the exit, the entrance and the ticket machine.
- When walking to the shops, rehearse the route in your mind’s eye before you set off. Visualise particular features along the way.
- If it is a car journey, study a map first and then write a list of directions down on a card and take it with you. If your journey involves several buses, write down the numbers of each bus and the stop you need to get on and off at.

At home – What did I come in here for?

Have you found yourself setting off to fetch an item from a room and then forgetting what it was you wanted when you get there? Going from one room to another without remembering why is a common memory problem. Like many problems it arises from a failure to register the information strongly.

The secret to overcoming this problem is to increase your concentration in registering the task.

- Before you set off for the room, **visualise** what it is you wanted or what you wanted to do. For example, if you wanted to go to the kitchen to get a pair of scissors, imagine the kitchen and your hand reaching out to pick up the scissors.
- **Rehearse** the information in your head as you go to the room “scissors, scissors, scissors”.
- Do not stop to do other things on the way to the room. **Go straight there.**
- It may seem a big effort, but if necessary have a small notebook in your pocket and write down what you are about to do.

Ideas to try at Home

Find someone to help you practice spaced retrieval. Write down your list of names as suggested above. Go over the list 10 times and then put it away for 5 minutes. Then recall as many names as you can. Go over the list 10 times again and this time wait 10 minutes before you try and recall the names. Repeat it two more times, waiting 20 minutes and then an hour.

If you start to have problems at the longer time delays go back to a shorter time delay until you can successfully remember the list. Then increase the time period again.

Jobs, Lists and Appointments

Remembering appointments can be a problem for us all. Many people have a book diary, or one on their mobile phone, in which they record meetings and appointments. Diaries and calendars are **external memory aids**.

External Memory Aids

There are many different forms of memory aids:

- Diaries & calendars (book or mobile phone)
- Alarm clocks
- Note books
- Notice boards and white boards
- Lists
- Pill boxes for tablets
- Voice recorders (on a smartphone), Tape recorders or Dictaphones

However, these will only be effective if you combine their use with **changing your behaviour**. There is no use having a diary if you do not get into the habit of writing appointments in it. New habits are not easy to form and you may find that you need a lot of encouragement to help you make use of your memory aid.

Using your mobile phone

Smartphones have many features that can support you, including calendars, reminders and alarms. These are designed to be as user-friendly as possible but you may need some time and practice to get used to them.



Smartphones also provide the opportunity to download memory games, exercises or apps. While there is no conclusive evidence that memory games or exercises will improve your memory, they are unlikely to do any harm if you enjoy them and use them sensibly.

Many smartphones also have a voice recorder, enabling you to record something you need to remember but don't have time to type. It may be worth setting a reminder to review your voice recordings each day so that you can note these down or add them to your calendar/diary.



Using a diary

Read your diary when you get up in the morning and several times during the day to remind yourself of what you have to do.

In the evening cross off that day before you go to bed and then the next morning it will be clear what day it is.

Enter appointments in the diary at the time you make them. Doing this helps your memory to **register** the information better.

Leave yourself notes around the house (such as on the bedroom door, on the kitchen door). On the notes ask yourself

- Where is my diary?
- Do I need to check what I am doing today?
- Is there something I need to write in it?

Most important of all.....

*Do **not** keep your diary in a “safe place”; keep it in the **SAME** place!!*

Using smart home devices

Smart home devices are automated, voice-activated and app-controlled devices. There are a number of different smart home devices e.g.: Amazon's Echo speakers and Google's Home speaker, available on the market although we do not recommend any particular brand.

The majority of these smart home devices connect to Wi-Fi via a voice activated service. These allow you to make calls, set alarms and timers, check your calendar, set reminders, manage to-do and shopping lists and ask questions, e.g.: when is my appointment with the dentist? They can also be used for leisure such as playing music. Some of them can find a local business and give you the directions to get there. Most of them can be used to book a taxi, order a pizza, get train times, etc. using your voice.

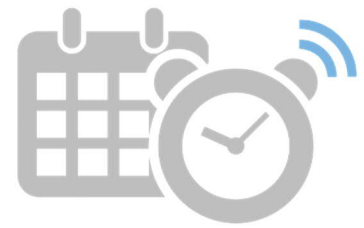
Remembering routine tasks

- Mobile phones, diaries, daily lists, and pillboxes are useful. Tick off jobs when you have done them, or tick off your list of medicines when you take each one. Only 'dismiss' reminders from your mobile phone once you have completed the task you set yourself.
- Set a routine of consistent habits, e.g. always taking tablets at breakfast, or as soon as you receive your reminder on your mobile phone.
- Make a chart showing regular events, using pictures or photographs, and put it up on the wall where you can see it clearly. You can do this for weekly events too. Divide the chart up into different sections for each day of the week. Use different colours for each day.

Appointments and non-routine tasks

For non-routine tasks it is even more important to get organised.

- Write down appointments or special tasks **immediately** – have your mobile phone, diary or calendar handy.
- Use a white board to write messages to yourself. Check it each day.
- Use “out of ordinary prompts”, for example, turn a clock round or turn a ring round as a reminder to do something.
- If you need to do something at a certain time, such as putting on the oven, or going out to catch a bus, set an alarm clock for the appropriate time or use your mobile phone. Add a note in your mobile phone and set a reminder or leave a note next to the clock telling yourself what it is you have to do.



But did I do it?

Having lists to remind you of what to do can be very helpful, but another memory difficulty is often that people can't remember if they've done a job or not.

The solution is to make yourself expend greater effort in **concentrating** at the time you do the task.

- Remembering if you have done a task like locking the door can be helped by **saying it out loud**, e.g. “That's the door locked now”. This helps to register the information in your memory.
- Visual imagery can be used. For example, when locking the door imagine yourself holding a giant key and a giant standing behind you helping you turn the key.
- Make a list of things that you have to do before you go out or go to bed and put it where you will not miss it. Questions to ask yourself could include: Have you locked the doors? Have you closed all windows? Have you got your keys?

Ideas to try at Home

With your partner make a list of the things you need to do each day; then things you need to do each week and then each month. For example things that you need to do each day might include, taking medicines, feeding the cat, watering the plants, and getting a paper. Weekly activities could include doing the washing, hovering the house, buying the groceries. Monthly activities might be paying bills, taking the car to the garage.



Don't just include chores, diaries can also be used to remind us to watch TV programmes, or go out to see a friend.

Now put these activities onto 2 white boards, one for weekly activities and one for monthly activities.

Where Did I Put It?

How many times a day do you wonder where you have put your glasses or your keys? Mislaying items is not only frustrating it can also be very worrying if it includes your wallet or money.

The simple answer to this, as we discussed above, is to have a routine.

Finding Things

Change the environment:

- Try to keep things in exactly the same place. Return them there after use.
- Have a hook or peg board for keys and make a habit of using it.
- Label cupboards with signs saying what is inside.
- If you need to take something with you when you go out, put it on the floor by the front door so that you have to step over it before you can leave.

Better encoding

- Try and visualise the place for keeping things. As previously suggested, the more bizarre or humorous the image, the better it will be remembered. For example, if you keep your keys on a table, imagine the table turning into the shape of a giant key.
- Again, talking to yourself as you put something down will help with encoding. "I have put my keys on the hook where they belong."

What did you say? Remembering what you see or hear

I've told you 3 times already that we're going out for lunch

Why is it that you can remember starting school but not what someone said 10 minutes ago?

At the beginning of this booklet we introduced the different types of memory. It seems that there are different processes for longer term memories and these are usually well preserved.

The more aware you are of your memory difficulties the more anxious you are likely to become when you are trying to remember something. The extra stress you put your memory under does not help it to work efficiently. However, just as there are memory strategies to help you remember names or lists, there are also strategies that can help you remember general information. One of these strategies is to use the 4 W's.

To see how this works, read through the following passage and then try and remember what you can. Write down what you can remember or talk this through with a friend or family member.

Last year had the highest recorded hours of sunshine since 1928. Profits in the South West from tourist trade rose by 15%. On the hottest day last July an estimated 100,000 people visited beaches in Devon and Cornwall. The good weather has had a downside however, the Head Gardener from the National Trust in Devon has said that trees in Trust gardens had grown more slowly due to the drought conditions.

How did you do?

It's difficult to remember all of this off the top of your head. However, if you put the information into manageable chunks it is easier. One method is the 4 Ws.

For everything that you read or hear, ask yourself the following questions:

What is the story about – This is the gist of the story. In the example it would be that there had been a lot of sunshine last year.

Who was involved? – In the example, the people mentioned are tourists and the Head Gardener.



When did it happen? – Are there any times or dates mentioned, such as last year, July.

Where did it happen? – Are there any places mentioned? In the example it mentions the South West and Devon and Cornwall.

If you use the 4 “**W’s**” you will find that it is easier to separate the information into manageable chunks and the questions will act as a prompt when you come to recall information.

Activity

Read through the following text and use the 4 ‘W’s’ as a guide to help you summarise the information. As you read it think: –



What is the gist of the story? (Very briefly)
Who is mentioned?
Where did it happen?
When did it happen?

Torrential rainfall in the South West last night caused severe flooding and chaos for drivers. The M5 was closed between Taunton and Tiverton and long queues developed as commuters tried to make their way home. Emergency services had to rescue two women who were cut off in their remote cottage and several hundred houses in Collumpton were flooded.

The 4 W’s principle can apply to different types of information, what you read in the newspaper, what you see on the TV, (including news and drama) and what you have done during the day. Sometimes not every W applies. But usually they can help you register and recall information. Next time your partner tells you information, ask yourself if any of the W’s apply.

Other ideas for remembering what you have been told

Think back to the explanation of how memory works. Remember this has 3 stages – registering, storing, recalling. As we have said before, enhancing registration will help recall.

To help **register** information that you have been told:

- Reduce distractions. Do not try and do other things when you are being told information. For example do not carry on with housework when you are being told something important. Similarly do not have other distractions in the background such as the TV, radio or music.

To help **register** and **recall** information:

- Rehearse the information that is important. If you are told that tomorrow you are going out to lunch with friends, Bill & Eileen. Then write down the question “What am I doing tomorrow?” and then the answer “I am going out for lunch with Bill and Eileen.” Ask yourself this question and give the answer to yourself 10 times. Wait 5 minutes and repeat the exercise 10 times again. Then wait 10 minutes

Ideas to try at Home

The 4 W's

During the next week, pick out a story from the newspaper. As you read it, ask yourself the 4 W questions: what, who, where, when. If necessary write down the 4 W's and your answers.



After 5 minutes retell the story to your partner. If you can recall the 4 W's, then wait another 15 minutes and recall the story again. Try again after 30 minutes and then 1 hour. This is a version of spaced retrieval that we did in Session 1.

If you cannot remember the details go back to 5 minutes and keep repeating the exercise until you feel you have mastered the details after 5 minutes. Then gradually extend the time again.

Errorless Learning

The idea with errorless learning is that you learn the correct answers to your queries not the incorrect ones. It is not helpful for your memory for you to be guessing endlessly and not getting the correct answer.



In fact coming up with the wrong answer can actually make things worse as you are in fact registering information that is incorrect.

With errorless learning, your partner needs to give you the correct answer straight away and then use spaced retrieval to help you learn it.

The key is to provide the correct information first in a statement and then ask a question. The following are examples:

"Your niece's name is Susan" (repeat after 5 minutes, then after 10 minutes)

Then ask

"What is your niece's name?"

At the beginning of the day:

"Today we are going to town to do some shopping" (repeat as above)

Then ask

"What are we doing today?"

Errorless learning

Tomorrow, start the day by having your partner tell you what day it is and what you are going to do. Ask him/her to repeat this several times leaving 5 minutes between each statement. Then ask him/her to ask you the question, "What day is it today?" and "What are we doing today?"

This booklet was prepared by Consultant Clinical Neuropsychologist with help from Clinical Psychologist and Assistant Psychologist.

For further assistance or to receive this information in a different format, please contact the department which created this leaflet.