



## MyBrain

### Chapter 3: Skills and Strategies Section 4: Cognitive Strategies

#### Cognitive Strategies for Better Recall

Encoding your memories for easy recall requires being well organized. *The reality is well organized people will have fewer problems with remembering intentions.* All of us, whether we're at increased risk for attentional failures or not, could benefit from putting more effort into being mindful, planning ahead to identify memory cues and practicing these new habits. It may require some lifestyle changes. Remembering is a skill; a skill you can learn, relearn or improve at any age.

#### Different Types of Memory Failure Require Different Memory Strategies

The development of skills is task specific. If you want to improve a specific skill, you will need to practice that particular activity. Performing a crossword puzzle can be helpful in improving verbal fluency and preventing tip of the tongue experiences, but it will not be particularly effective in helping you find your car keys. Likewise, playing Sudoku, brain teasers or computer games may be helpful in increasing speed and efficiency of information processing associated with building working memory and fluid reasoning, but should never be substituted for an automatic pill dispenser box if one can't take blood pressure medications as directed.

If you want to overcome specific skill deficits you need to identify the type of memory you are having problem with and then target a specific strategy to improve it.

#### Memory Loss or Attention Failure?

Some types of memory problems are not so much a kind of memory loss as much as inattentive errors. Inability to remember infrequent or unfamiliar words, where you might have left your car keys or why you walked into a room, are common signs of distractibility or forgetfulness. Occurrences like these represent attention failures rather than a form of actual memory loss.

The act of remembering requires goal-directed behavior associated with the frontal lobe like active attention and strategic planning. While forgetfulness can occur at any age, attentional lapses become more frequent as we get older because of vulnerability to fatigue, medical problems or emotional duress.

### **A. Remembering Intentions**

The most common form of forgetfulness is prospective memory loss, or forgetting to remember. It is especially difficult because it requires you to remember out of the ordinary events without prompts. For example, remembering to return a book to the library or to defrost the chicken for dinner.

Because future based memories lack a prompt, it is your responsibility to create one. Remembering not to forget an appointment takes sitting down and working out a strategy, *in advance* to ensure that events do not slip your mind in the near future.

#### **External Aides**

When you need to remember anything in the future, whether the event is this afternoon or next month, use of schedules, alarms, to do lists and calendars is your best bet. Maintain a calendar, smart phone or electronic pocket organizer to write down appointments, important dates and phone numbers.

#### **Rely on Daily Anchors**

Memory requires something to trigger it. Without a regular schedule of daily activities it is hard to put the necessary “hooks” into the day to remember to perform an activity at the right day and time.

Maintaining a regular schedule of daily activities, including timing of sleep, meals and medications facilitate brain recovery by reducing some of the burden on the working memory.

#### **Assess the Cost of Forgetting**

The general rule of thumb to decide what strategy to use to avoid an absentminded error comes down to how much a mistake will cost you. If you can't afford one slip up, then you have to devise a failsafe plan. Medications and finances fall into this category.

If you have multiple chronic medical problems, are seeing numerous health care specialists, have found yourself confused about what you should be taking or just having problems keeping up with all your medication changes, then consider talking with your doctor about installing an auto pill box.

A case manager from the hospital can be sent to your home to consult with you about setting up a pill box with a reminder timer that will dispense medications at the correct time during the day. In addition, medications can be ordered and filled for you to ensure medications are being taken exactly as your doctor prescribed.

If you are having trouble paying bills on time, whatever your age, an easy solution is set up automatic bill pay. You can also speak to your bank about assigning one of their financial officers to manage your finances and pay bills for a monthly fee.

#### **A Place for Everything**

You will have fewer problems misplacing common objects, like keys and eyeglasses, if you identify a specific place to keep them. Then you need to make sure you stay mindful and put them in that exact location each time. For example, a simple solution is putting a basket near the front door to immediately drop items you will need before you walk out the door again.

If you depend on a smart phone, tablet or cell phone, remember it is only useful if charged. Consider setting up a charge station in the kitchen or other common area so that you can get into the habit of immediately taking electronic devices out of your pocket or purse at the end of the day, recharging them and picking them back up for the next day before you leave home.

### **Check Your Appointment Calendar Frequently Through the Day!**

Get into a habit of checking your calendar several times a day.

### **To Do Lists**

Keep a to-do list of miscellaneous things you need to do each day or week, including people you need to call, items you need to buy, and routine maintenance on your car or your home. Keep the list in an electronic organizer or memory notebook.

### **Reminder Note to Self**

Remember to keep updated home and work numbers of family members or friends to contact in an emergency. Stop what you are doing and take the minute or two it takes to update your organizational system when given new information. Remember to keep updated home and work numbers of family members or friends to contact in an emergency. Keep the system with you at all times.

### **Developing Good Habits**

Calendars and lists will not be effective if you don't use these tools regularly! The easiest way to start a new routine or habit is to fit your new routine into your existing pattern of behavior. For example, schedule medications around meal times or exercise routine around work schedule. A skill or habit that is practiced to the point it has become automatic will never be completely lost; however, skills become rusty and slow without regular practice.

## **B. Strategies for Better Immediate Recall**

Most people think that good memory means good retrieval. But actually, that's putting the cart before the horse. Good memory starts with good learning and forming a strong association when acquiring new information.

Recent events are temporarily stored in short term or immediate memory. Learning is considered still "under construction", and without further action on our part information is at risk of being lost. Effortful encoding strategies, such as mindfulness training, rehearsal and repetition, are critical to help strengthen the connections and complete the consolidated learning process.

The best strategy to prevent the daily episodes in our life from fading away is to increase exposure to information we want to remember. Engage in active listening, clarify points you don't understand, ask questions, repeat information and take notes.

Learn to slow down. Train your focus to take in details as if you were snapping a mental picture of the event. The more information you encode the easier it will be to retrieve. Think how much faster and

easier you could put your hands on a particular fact if it had been labeled and systematically filed at the time of learning in your mental file box.

### **Mental Rehearsal**

For short periods of time, repeating an intention to yourself over and over can be an effective way to remember until you have successfully completed the task.

### **Acronyms**

Create a phrase using the first letter of a series of items you'd like to remember. For example, to remember to pick up milk, eggs, bread, cereal, Nutella, and avocados, one might create the phrase: My Entire Book Collection Needs Attention (M.E.B.C.N.A); bizarreness can add to memorability.

### **Visualizing**

Creating detailed imagery and associations can help with solidifying memories over the long term. The more creative you can get with your imagination, the better. For example, if you meet someone named Nick, try to envision him with a white beard and think of him as St. Nick.

### **Build in Procedural Memory**

By simultaneously verbalizing and performing a rote action, we become more conscious of performing it. By simply stating out loud, "I am placing my car keys on the key ring by the front door," we can register this memory at a deeper level.

### **Active Listening**

Simply pay closer attention and elaborate information at the time of learning. For example, when someone is talking to you, look at the person, ask additional questions, or paraphrase what was said to make sure you understood it and reinforce the information.

### **Repeat, Repeat, Repeat**

Rehearse information to yourself soon after hearing it. If someone gives you directions repeat them to the person to make sure you get them right to help reinforce it in your mind.

### **Rhyming**

Incorporating what you'd like to remember into a rhyme can help with later recall. A common example of this used for plumbing is "righty tighty, lefty loosey".

### **Avoid Distraction**

Be aware of what is going on in your environment when performing a specific activity. Reschedule an activity if you find yourself feeling tired or frustrated.

**Be Aware of Different Task Demands**

Think of tasks as having different price tags. Some activities, like bill paying, would result in a costly mistake in the case of an inattentive error. Some tasks, like house cleaning, not so much. Prioritize tasks according to personal cost of a potential inattentive error and then plan accordingly. Tasks ranking high must be performed at a time of day when you will not be interrupted, are feeling alert and calm. Although tasks like taking medications are time sensitive, you should develop a failsafe plan in advance, with input from family as necessary to ensure that absent minded mistakes are avoided.

**Avoid Multitasking Your Thoughts**

Engage in Active Listening, Mental Rehearsal and Over Learning. Single-mindedness pays off by reducing risk of inattentive errors.

**Make It a Habit**

Research indicates the benefits accrued from using mindfulness strategies are not maintained over prolonged periods of time if they are not practiced. Thus, like all other positive habits including exercise and a healthy diet, the use of memory enhancement techniques must be *routinely* practiced in order to maintain benefits. You know what they say, “If you don’t use it, you lose it.”

**C. Strategies for Better Working Memory**

Immediate memory loss is a problem of volume exceeding space. Conscious attention is limited to about 10 seconds and active memory is reliably limited to 7 bits of information (about the size of a telephone number). Normal aging, neuromotor disease, attention or mood disorders can all result in cognitive slowing and distractibility and thereby rapidly overload the capacity of our working memory.

**Increase Comprehension**

The more thoroughly you understand new information, the greater the odds are you will remember not only the gist of it, but the details as well. You can improve comprehension by rereading material, asking questions and discussing it.

**Cut Down on Irrelevant Information**

Retention problems can be reduced if spouses and family members would keep their talking points brief, clear and specific. It’s also a good idea to write down information in a power point style, using a major header followed by 3 sub points. Imagine you’re giving a presentation to a busy executive. You have eliminated the filler, although, not necessarily the complexity level.

**Fewer Electronic Distractions**

Set email so that it only checks for new messages every 30 minutes. This will provide you with longer chunks of time without the distraction of messages, which invariably are NOT life altering.

**Do Not Disturb**

Put “Do Not Disturb” signs up at work or at home when working on things which require concentration. Try rewarding yourself with a favorite distraction (a game, a trip to the water cooler) once you’ve completed a task.

**Speak More Slowly**

Too bad we can’t replay life events like a movie on TIVO. Information comes at us like a firehose and without the benefit of a remote control to slow down or replay what we did not catch. By simply slowing down the rate of presentation and repeating information, we can usually get a complex or new point across.

**Power Naps**

Taking power naps, from 10-20 minutes, can help consolidate memories and learning. Sleeping longer, however, can end up making you groggy.

**Checklists**

For procedures that you may have difficulty remembering from one time to the next, like how to use any of your fancy, new digital equipment in your home for example, write down the instructions on colored filed cards and tape them nearby.

**Change It Up**

Changing from one task to another sooner can restore focus for a brief period of time. Tasks can be rotated, say on 20 minute intervals.

**Know your Strong Suits**

Observe whether you may have greater difficulty at certain times of day depending upon fatigue or pain-related issues. Some people with working memory issues seem to do better in the morning for these reasons. Therefore, it may be helpful to schedule more demanding tasks in the morning.

**Spaced Rehearsals**

You have heard it before, but avoid cramming. You will remember something more effectively if you rehearse it for one minute once an hour for 10 consecutive hours than if you rehearse it for 10 minutes all at once. Spacing out learning sessions allows your brain a chance to rehearse, replay and consolidate information, moving it from the more fragile frontal lobe to the medial temporal region of the brain.

**Multimodal Learning**

Combine verbal instructions with visual cues, demonstrations and hands on guidance when introducing new material. A multimodal presentation reduces the burden on the working memory.

**Be Aware of Distractions**

If you find you tend to become distracted during conversations, try getting together with people in a quieter environment, such as a home instead of a noisy restaurant. In order to focus on a companion without having your attention wander in a large communal setting, try having your companion sit against the wall and you sit facing them.

**Avoid Multitasking**

*Perhaps the best advice to reduce the load on our working memory is to avoid multitasking or doing more than one task at a time.* A common, though misguided, belief is that we are being time efficient by completing two tasks at the same time. In reality, multitasking involves switching our attention rapidly between two tasks which is not the same thing as simultaneous performance. It is only successful to the degree that only one task requires our attention or that both tasks are familiar or well practiced.

It's a balancing act that does not allow for our attention and limited working memory to be drawn away by competing environmental distractions or internal preoccupations, such as feeling anxious, worried or depressed. As you can see, driving and talking on the cell phone would never meet this criterion.

**REFERENCES**

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2. McPherson, F. (2004). *How to remember intentions.* [www.memory-key.com](http://www.memory-key.com)