



EPILEPSY & The Facts

Memory and Epilepsy

Why do people with epilepsy often have memory problems?

Seizures can interfere with the memory process as can any underlying disorder in the brain, that causes seizures. It may also be the effects of your anti-epileptic medication. Or it may not actually be a memory problem at all.

How can seizures cause memory problems?

Memory is a natural brain process that requires continuing attention and recording by parts of the brain. Seizures interfere with memory by interfering with attention or input of information. Confusion often follows a seizure, and during this foggy time new memory traces are not being laid down in the brain. Tonic-clonic (grand mal) seizures in which you lose consciousness can interfere with normal brain processes and disrupt the registration phase of short-term memory. Sometimes longer term memories from the period prior to the seizure are lost as well, as these memories may have not yet being fully integrated into the brain's memory system. If a seizure is very severe and prolonged (status epilepticus) and you experience hypoxia (insufficient oxygen to the brain), this can cause secondary damage to your memory system.

What else can cause memory problems?

An underlying brain tumour or lesion can disrupt the memory process. Or if the focus of your seizures is located deep in the temporal lobe of your brain near some of the parts that are important for memory (e.g. hippocampus), this may be causing your problem. Some people with epilepsy have unusual electrical activity in their brains between seizures—what is known as “inter-ictal” or “subclinical” activity. This can interfere with attention and also, probably, with memory. Or perhaps you are experiencing a cognitive problem (e.g. an attention problem, language problem, a visual or spatial problem) and not a true memory problem. Perhaps the problem is emotional and not memory-based, brought on by anxiety in certain situations or by depression. Your ability to recall may be interrupted by your mood or by sleep disturbances.

Can anti-epileptic medications cause memory problems?

Anti-epileptic medications may affect your thinking and memory, but on the other hand, they may control your seizures, and having lots of seizures can lead to more memory loss. Discuss the side-effects of your medication with your neurologist. Do not stop taking your medication on your own.

Are all memory problems the same?

No. Learn more about your specific memory problem. Do you have memory lapses following a seizure? Do you have fluctuations in your memory, where it is better some times more than others? Are the fluctuations related to stress, or to certain kinds of tasks or situations? For example, is your memory worse when you are in a particular place or with



a particular person? Many kinds of memory problems are stress-related. Can you remember things if you are given a prompt or cue? Do you have a better memory for pictures (visual type memory) than words (verbal type). Memory is lots of different processes. Learn which ones you rely on in order to maximize your strengths and accept your limitations.

What are the processes of memory?

There are many different ways to classify how memory works. Some people rely more on their verbal memory, remembering in terms of words or sounds, whereas others use their visual memory, relying on pictures or spatial relationships. Which process works best for you? There is semantic memory, referring to knowledge-based memory of a particular topic, like the history of World War I, for example. This differs from episodic memory, or memory of a particular event, such as an outing you were on last week. Most of us have heard of short-term (or working) memory vs. long-term memory, which really refers to the memory of things in the recent past.

Getting the information into our memory is called the encoding and then the consolidation process, and the separate process of getting it out again is called retrieval. Some people have a problem getting information into their memory in the first place, whereas others find the retrieval challenging, and may just need a cue or prompt before they are able to retrieve a memory. Start to notice which memory processes are working well for you so you can play to your strengths and minimize your weakness.

Do my emotions play a role in my memory problems?

Try to learn more about how you operate. There may be situations that are important to you where your memory problems keep interfering, but there are other situations of less value to you when it should be less of an issue. What are the demands on you and what do you do? You may be making your problem worse by being mad at yourself when you can't remember something. If you make a memory mistake, don't fight it and impair your cognitive skills further, just move on. Trying harder usually won't help you remember. An emotional attitude of acceptance and accommodation is more beneficial to memory than self-defeating behaviours or thoughts. Chances are your memory problem is not going to go away, so keep your expectations reasonable and look at ways to work around the problem.

What are the most common everyday memory problems?

According to one survey of the five most common memory problems, first is being unable to come up with a word that we feel is "on the tip of our tongue", apparently because of a verbal memory processing problem. Second is having to go back to check to see if something was done, such as turning off the stove, probably reflecting a failure to pay adequate attention at the time. Third is forgetting where we put something, probably a visual-spatial memory process problem. Forgetting the name of someone or thing is fourth, apparently a verbal memory malfunction. Not remembering what has been said or been told is another. The types of problems people have vary, and how serious a nuisance the problems are varies from person to person as well.

Do memory problems ever improve over time?

If your memory problem is the product of a newly acquired brain injury, you may have a period of spontaneous recovery as the brain cells reorganize during the period right after your injury. However, if more than a couple of years have elapsed since a brain injury, significant change is not expected, and after two or three years all the recovery will likely be completed. If your memory problem is rooted in something that happened 20 years ago, a natural recovery is unlikely at this point. Accepting that there is no "cure" for such memory problems is important. Strategies can however help you work around the problem.

Can memory be improved through mental exercises?

Staying mentally active is a good thing, but it won't really help your memory problem. Research has shown that playing memory games or doing exercises to sharpen your memory doesn't help your memory in general. Memory is not a muscle: exercising it doesn't work. What is more useful is developing techniques and strategies to help you cope with your memory problem.

What can I do to live better with a memory problem?

Memory coping is about good memory habits, developing a healthy "memory diet" (like the four food groups). Improved results can occur if you allow the type of memory that works best for you to compensate for another type; for example, using pictures to help you remember if your visual memory is stronger. Use consistency, and control what you can to make remembering easier. Telling other trusted people that you have a memory problem is an excellent technique—they can help by cueing you. Just saying, "I tend to forget that, I would appreciate it if you would give me a reminder" can make an important difference. Don't be afraid to rely on others. Recognize that your mood and stress can contribute to memory problems. Keep your expectations for yourself reasonable. And be flexible in your approach to fit the memory demands on your memory.

For more information on the impact of epilepsy on memory and to find out how we can help you, please contact Epilepsy Toronto at 416.964.9095