

FACT SHEET



Cognitive Changes after Brain Injury Memory

QUICK FACTS

- Challenges with memory is very common following a brain injury
- There are different types of memory loss:
 - **Post-traumatic amnesia:** confusion and disorientation immediately following the brain injury, the individual is unable to remember any event following the injury. Until post-traumatic amnesia resolves, no new memories can be made
 - **Retrograde amnesia:** a loss of memory for events prior to the brain injury. Individuals may not recognize family members and their previous living environment
 - **Short-term memory loss:** recent events are forgotten, the duration of short-term memory can be as little as a few seconds

WHAT MIGHT IT LOOK LIKE?

- Unable to remember past events/conversations
- Unable to remember future events, such as appointments
- Unable to follow a schedule or completing activities
- Difficulty recalling new information that has been acquired, especially when under stress
- Learning simple motor sequences can become challenging
- Unable to recognize loved ones or previous acquaintances
- Disorientation with space and time
- Difficulty remembering what needs to be done during the day
- **Confabulation** is a memory disorder where the person produces false memories (i.e. they report remembering events that never occurred or remember events having occurred at an incorrect time or place)

WHAT ARE THE POSSIBLE CAUSES AND COMPLICATIONS?

Possible causes:

- May be due to an injury to any of the several brain structures involved in memory (e.g. hippocampus, temporal lobes, frontal lobes)
- Memory loss is usually due to a physical reason rather than an unwillingness to remember
- Poor sleep and fatigue
- Other health conditions, including anxiety and depression
- Some medications can exacerbate memory problems

Possible complications:

- Memory problems may have major emotional effects such as feelings of loss, anger, and an increase in depression and anxiety

Disclaimer: This information is not meant to replace advice from a medical doctor. Consult a health care provider regarding specific medical concerns or treatment.

FACT SHEET CONTINUED.



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WHAT CAN WE DO?

- Adapt the environment so the individual relies on memory less
 - Keep notepads available, label cupboards and doors
 - Make detailed notes of important information in one place
- Encourage the individual to use memory aids
 - Use reminders (e.g. alarms on phone, agenda/calendar/ to-do list, checklists, take photos of important information)
 - Make a daily log of things they do each day (e.g. memory book)
- Establish a consistent routine
- Repeat/rehearse, paraphrase, and visualize important information
- Therapeutic programs of stimuli such as photographs, anecdotes and artifacts may help restore some memory and may be calming for the individual
- Use verbal and written cuing
- Support the individual as they deal with the emotional effects of memory loss by:
 - Encouraging them to share their feelings
 - Finding individuals who understand what they are going through (e.g. OBIA's Peer Support Program)
 - Helping them to participate in activities they enjoy such as listening to music

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TYPES OF MEMORY LOSS

There are many types of memory issues that can result from brain injury, depending on the location and severity of the injury.

The chart below illustrates some of the issues and tips that may help. Please note that working memory is often called short-term memory and remote memory is another term for long-term memory.

	Memory Issues	What Happens	What Helps
...Holds up best	Remote Memory	Events years ago, especially if emotionally significant, usually well remembered (e.g. daughter's wedding) Alarm bells: cannot remember daughters wedding	Looking at old photos or movies or talking with someone who was there
	Procedural Memory	Physical skills such as playing an instrument, knitting, or riding a bike are often not lost. These are more likely to be impaired by other problems such as arthritis or loss of balance Alarm Bells: Forget how to knit or play instrument they once knew	Practice skills you want to keep up to avoid getting rusty
	Semantic Memory	General knowledge and insight hold up well, but retrieval suffers. They may not be able to remember people's names, or names of things. Alarm Bells: forget wife's name or what car keys are for	Link to something you already know (e.g. think of George Clooney when you meet a new George)
Declines most....	Episodic Memory	Days to weeks ago. Can't remember details of recent events, such as the name of the film they saw last week or book they just read Alarm Bells: Can't remember an entire event, such as going to dinner with friends	Write things down and keep a diary. Make mental or visual notes of things to remember
	Working Memory	Seconds to minutes ago. Ability to organize, plan and problemsolve deteriorates. Can't remember what they came into a room for, or where they put the car keys Alarm Bells: Can't remember something they were just told	Finish a job before starting another; always put things back in the same place
	Prospective Memory	Remembering to do something in the future (e.g. keeping doctor's appointments, paying bills, being ready when visitors come) Alarm Bells: Can't remember anything that's planned for next week	Leave yourself notes, make to-do lists, and/or use a daytimer/ electronic organizer

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