Memory and Moderate to Severe Traumatic Brain Injury

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This fact sheet explains memory problems that may affect people with moderate to severe traumatic brain injury (TBI). By understanding the new limits on their memory and ways to help overcome those limits, people with TBI can still get things done every day.

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Memory and Traumatic Brain Injury

- Memory problems are very common in people with moderate to severe TBI.
- TBI can damage parts of the brain that handle learning and remembering.
- TBI affects short-term memory more than long-term memory.
- People with TBI may have a tough time "remembering to remember." This means remembering to do things in the future, such as keeping appointments or calling someone back when you've promised to do so.
- People with moderate to severe TBI may not remember the incident surrounding the injury.
- With the help of certain strategies, people with TBI can learn to work around memory problems and get things done every day.

What kind of memory is affected by TBI?

"Memory" isn't just one kind of ability. There are several kinds of memory, and TBI affects some more than others.

Long- and short-term memory

TBI-related memory problems don't work the way you might see "amnesia" portrayed on TV. You don't forget everything from your past and remember what happens going forward. In fact, you're more likely to remember things from the past, including much of what you learned in school. This is known as *long-term memory*. However, after a TBI, you may have trouble learning and remembering new information, recent events, or what's happening from day to day. This is known as *short-term memory*. Here are some short-term memory problems that are common in people with TBI:

- Forgetting important details of a conversation, such as remembering to pass along a phone message
- Forgetting where you left things, like keys, a cell phone, or a planner
- Feeling unsure of what you did or said this morning, yesterday, or last week; this can lead you to say things or ask the same questions many times
- Losing track of time or feeling unsure of what day it is

- Being unable to retrace a route you took earlier in the day or week
- Forgetting all or part of what you read in a book or what you saw in a movie

Prospective memory

TBI may also affect *prospective memory*, or "remembering to remember." This means remembering plans and intentions long enough to act on them. Here are some prospective memory problems that are common in people with moderate to severe TBI:

- Forgetting to keep appointments or showing up at the wrong times
- Telling someone you will call or visit at a certain time, then forgetting to do so
- Forgetting what you were supposed to do or intended to do at home, work, or school or in the community
- Forgetting important occasions, such as birthdays, holidays, and family events
- Forgetting to take medicines at the right time
- Forgetting to pick up children at a certain time

Although TBI affects new memories more than old ones, people with TBI may have trouble retrieving the correct information when needed. For example, you may recognize your aunt and know who she is, but have trouble remembering her name. Or you may be able to define all the words on a vocabulary test, but have trouble remembering the exact word when you're talking.

Memory of the injury

People with TBI may not remember the injury itself. In this case, the brain has not stored the injury as a memory or series of memories.

People may remain confused and unable to store memories for some time after the injury. The loss of memory from the moment of TBI onward is called post-traumatic amnesia. It can last from a few minutes to several weeks or months, depending on the severity of brain injury.

If you can't remember the events of your TBI, you likely never will. That's because your brain did not store those memories. The best way to learn about the injury is to ask family members, friends, or medical personnel who may have objective information.

What Can You Do to Help Your Memory?

After a moderate to severe TBI, you may have more trouble remembering things from day to day. Research has found very few ways to *restore* the brain's natural ability to learn and remember. One or two medicines may be worth trying (ask your doctor). But "brain training" programs and memory drills don't really help.

Using *compensatory strategies* is the best way to tackle memory problems and still get things done. This approach uses memory devices that we all use to make up for limited memory storage in the brain (e.g., a grocery list, address book, notepad, or alarm on a cell phone).

Some people think that these methods weaken memories. But that's not true. When you write down information or enter it into a phone or computer, you may actually strengthen the memory trace in your brain, and the information will always be available for you if you need it.

Here are some compensatory strategies to help work around memory difficulties:

- Get rid of distractions before starting on something that you want to remember.
- Ask people to talk slower or repeat what they said to make sure you understand it.
- Give yourself extra time to practice, repeat, or rehearse information you need to remember.
- Use organizers, notebooks, or a cell phone calendar or "apps" to keep track of important information, such as appointments, to-do lists, and telephone numbers.
- Keep all items that you need to take with you (e.g., wallet, keys, and phone) in a "memory station" at home—like a table by the door or a special section of the counter.
- Use a pill box to keep track of and take your medicines accurately.
- Use checklists to keep track of what you've done or different steps in an activity. For example, make a checklist of bills that you need to pay each month and the dates on which they are due.

Having memory problems after TBI may make it harder for you to remember to use some of these strategies. At first, ask a family member or friend to remind you of these strategies. Over time, the strategies will become a habit, and you can use them on your own.

Other Supports

Memory problems can make it especially difficult for people with moderate to severe TBI to succeed in school, or to perform well in jobs that demand a lot of learning and memory. College students can contact the Disability Supports Services office at their school to receive assistance with note-taking and other services to support learning. The Vocational Rehabilitation services available in every state may be able to supply job coaching or counseling to assist workers who need memory supports, and may provide additional help to college students.

Authorship

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