

Problems with Perception of Time After Traumatic Brain Injury

by Kelli Williams Gary

After a traumatic brain injury (TBI), patients can experience a variety of problems. One problem that is not commonly discussed is the perception of time. This refers to the experience or awareness of the passage of time. In other words, your body has an internal clock that helps you estimate the length of a task without looking at a real clock. Imagine when you are doing something that is not interesting or boring, a few minutes may seem like an hour, but if you are extremely focused on something that takes all your attention or brings pleasure, an hour can seem like minutes. These are examples of time perception and it is an important for many activities that are done every day.

The perception of time helps us to get up in the morning, organize how we get ready, and arrive at work or appointments at the right time. If there is a problem with time perception because of damage to the brain, people would have difficulty accurately judging how long to bathe, groom, dress, eat, and travel so they could arrive at work on time. This results in not being performed (e.g., eating breakfast) and/or consistently being late. Difficulty with the perception of time can cause the following problems: could arrive at work on time. This results in not being performed (e.g., eating breakfast) and/or consistently being late. Difficulty with the perception of time can cause the following problems:

- Slowness in completing specific tasks in a daily routine
- Issues with following a timed schedule
- Problems with ordering smaller activities to complete a larger task
- Difficulty with completing multiple tasks within a given time frame
- Misjudging how long a certain task will take

It is important to understand that problems with the perception of timing of events can be as disabling as not being able to complete the steps of the task itself. To improve independence in daily activities, the focus should not just be placed on relearning a task. There must also be focus on increasing the ability to complete the task in a reasonable length of time and with fewer prompts or cues. Let's consider the following scenario:

Prior to his TBI, Joe worked as Head Chef in a fine dining restaurant. He spent three weeks in the hospital and had one month of outpatient rehabilitation. His physical recovery was quick, but he continued to have problems with memory and concentration. After a short time at home, Joe wanted to return to cooking at the restaurant. His boss agreed to let him come back part time, assisting another chef instead of being in charge.

Before his injury, Joe was able to successfully prepare multiple, complex meals under very tight time demands. Post-injury, he had difficulty establishing a consistent routine to cook even simple meals. He struggled with multi-tasking and time-sensitive aspects of his job. His slowness in completing tasks and difficulty recalling cooking instructions added to his frustration. What could Joe do to try and fix this?

- He made a plan with his boss to make sure he wasn't overworked. Before as Head Chef, Joe did everything! Instead, he stuck with simpler tasks and a set amount of meals per hour.
- Joe had to relearn things he had done previously without much thought. Setting timers when he would start certain tasks helped him stay focused and not get distracted.
- Other staff were patient with him and helped him review his new methods for staying on task prior to working on a busy Friday night.
- After a while, Joe didn't need the prompts or timers as much as when he first returned to work.

Perception of time plays a significant role in everyday life. Disruption in accurately estimating time can likely cause frustration in real world situations (e.g., cooking, dressing, shopping, etc.). There are steps that can be followed to help with time perception by establishing basic routines, breaking down tasks, and establishing prompts to promote accuracy with time.

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