



Do you have trouble with alcohol since your brain injury?

What does this mean?

After a traumatic brain injury (TBI), many people notice their brains are more sensitive to alcohol. More simply stated, alcohol is a toxin to brain cells and can impede brain recovery processes.

How might use of alcohol affect recovery after a brain injury?

Drinking increases the chance of getting injured again, making cognitive (thinking) problems worse, and increases the chance of having emotional problems such as depression. In addition, drinking can reduce brain injury recovery. For these reasons, staying away from alcohol is strongly recommended to avoid further injury to the brain and to promote as much healing as possible.

Common examples of alcohol difficulties:

Alcohol use creates a greater risk of:

- Seizures.
- ♦ Another traumatic brain injury.
- Cognitive impairment.
- Depression.
- Sexual dysfunction.

Recommended strategies:

There are many ways to stop using alcohol or other drugs and many ways to reduce the potential for harm. Here are few:

- Don't underestimate your ability to change your alcohol use if you want to.
- Cut down or stop drinking.
- ♦ Ask for family members' help.
- Talk to your doctor.
- Seek professional help, such as addictions counseling or Alcoholics Anonymous (AA).

Sources: IU School of Medicine / Rehabilitation Hospital of Indiana TBI Model Systems. Further, the information in this FACT SHEET is also based on a consensus of expert opinion of the Rehabilitation Hospital of Indiana Departments of Neuropsychology and Resource Facilitation.

Disclaimer: This information is not meant to replace advice from a medical professional. You should consult your health care provider regarding specific medical concerns or treatments.



FACT SHEET

Brain Injury & Attention/Concentration

Do you have trouble with attention or focus since your brain injury?

What does this mean?

Attention is a vital part of our everyday functioning. All of us, from time to time, become distracted, whether it is a phone call in the middle of cooking dinner or being interrupted during a meeting. When a person sustains a brain injury, the following types of attention may be affected:

- Focused Attention: The ability to attend to an activity or task with no other distractions. For example, a person might do a crossword puzzle in silence.
- Selective Attention: The ability to attend to a task and block out unimportant information. For example, reading a book while background music plays.
- Alternating Attention: The ability to switch between tasks. This is especially common in real-life situations. For example, working in an office and being interrupted by answering phone calls, filing and greeting clients.
- Divided Attention: The ability to do two or more tasks at the same time. One of the most common examples is driving a car while changing radio stations and looking for an unfamiliar exit.

How might a brain injury affect attention / concentration?

A person with a brain injury may be unable to focus, pay attention, or multi-task. Since attention skills are considered a "building block" of higher level skills (such as memory and reasoning), people with attention or concentration problems often show signs of other cognitive problems as well.

Common examples of attention/concentration difficulties:

- Restlessness and being easily distracted.
- Difficulty finishing a project or working on more than one task at a time.
- Problems carrying on long conversations or sitting still for long periods of time.

Recommended strategies:

- Decrease the distractions. For example, work in a quiet room.
- Focus on one task at a time. Take breaks when you get tired.
- Begin practicing attention skills on simple, yet practical activities (such as reading a paragraph) in a quiet room. Gradually make the tasks harder (read a short story) or work in a more noisy environment.
- Ask the speaker to slow down or repeat what they have said.

Sources: IU School of Medicine / Rehabilitation Hospital of Indiana TBI Model Systems; Lash & Associates Publishing/Training, Inc. Further, the information in this FACT SHEET is also based on a consensus of expert opinion of the Rehabilitation Hospital of Indiana Departments of Neuropsychology and Resource Facilitation.

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Do others notice issues since your brain injury that you do not?

What does this mean?

A person's ability to be aware of their strengths and weaknesses is extremely important. But such self-awareness requires complex thinking skills that are often weakened after brain injury; many individuals have trouble seeing that they have problems with memory, attention or reasoning. They may also be unaware of how their actions and behaviors have changed in ways to which others may object.

How might a brain injury affect awareness?

If individuals with brain injuries lack self-awareness, they won't know that they need to compensate for their thinking problems and won't recognize that their behavior may be inappropriate or offensive to others. The type and degree of difficulty in this area varies from person to person as time passes and may improve over time. Many people with a brain injury have some level of understanding that they are not the people they used to be. They may experience difficulties at work and in social situations, but may not understand how they themselves may be contributing to the problem. Instead, they may blame others. A lack of awareness could also prove potentially dangerous if it leads people to do things that they are no longer able to safely do, like operate potentially dangerous machinery or tools.

Common examples of awareness problems:

- Consistently hearing from others that you are having problems, even though you don't realize it.
- Denying that you have cognitive problems, or problems with inconsiderate or inappropriate behavior, even if these are obvious to others.

Recommended strategies:

- Keep an open mind and consider the possibility that, when people tell you that you are making mistakes and doing things that make them uncomfortable, it may reflect a problem in you stemming from the brain injury and not a problem in them.
- Seek out feedback from those around you to know if you are having difficulties you are not aware of.
- Keep a journal/diary of your daily events so you can track, look back, and identify patterns to help increase self-awareness.

Source: brainline.org, WETA; acquiredbraininjury.com, The Rehab Group. Further, the information in this FACT SHEET is also based on a consensus of expert opinion of the Rehabilitation Hospital of Indiana Departments of Neuropsychology and Resource Facilitation.

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Do you have trouble with balance since your brain injury?

What does this mean?

Balance is the ability to keep your body centered over your feet. The ability to maintain balance is determined by many factors, including physical strength and coordination, senses, and cognitive (thinking) ability. Most people can control their body movement within certain limits before losing their balance and needing to adjust their posture or taking a step to keep from falling. Adjusting posture or taking a step to maintain balance before, during, and after movement is a complex process that is often affected after brain injury.

How might a brain injury affect balance?

People with brain injury commonly report problems with balance. Between 30% and 65% of people with brain injury suffer from dizziness and disequilibrium (lack of balance while sitting or standing) at some point in their recovery. Dizziness includes symptoms such as lightheadedness, vertigo (the sensation that you or your surroundings are moving), and imbalance.

Common reasons for balance issues:

- ♦ A possible side effect of medications.
- A drop in blood pressure when standing or sitting up suddenly.
- Problems with eyesight (vision impairments).
- ♦ Inner ear problems (vestibular impairments).
- Problems with your ability to sense things (sensory impairments).
- A traumatic injury to the brainstem and cerebellum.
- Leakage of inner ear fluid into the middle ear (called perilymph fistula).
- Mental health issues (anxiety, depression or a fear of falling).

Recommended strategies:

- A physical or occupational therapist can help design a program that is safe to practice at home. Be cautious when working on balance, and make sure you work at an appropriate level to avoid falling when no one is around.
- ♦ Increase your strength and flexibility to help your balance.
- Find your limits in balance by moving your body over your feet as far as you can without lifting your feet.
- Practice movements that allow the transition from one position to another.
- Practice standing or walking in different conditions.
- Practice activities that will improve balance while walking.

Sources: IU School of Medicine / Rehabilitation Hospital of Indiana TBI Model Systems. Further, the information in this FACT SHEET is also based on a consensus of expert opinion of the Rehabilitation Hospital of Indiana Departments of Neuropsychology and Resource Facilitation. RHI Resource Facilitation Department 9531 Valparaiso Court • Indianapolis, Indiana 46268 Tel: (317) 329-2455 | Fax: (317) 872-0914





Do you have trouble with depression since your brain injury?

What does this mean?

Depression is a feeling of despair, excessive self-criticism or hopelessness that does not get better over time and is overwhelming enough to interfere with daily life. This is different than the normal sadness and grief after a loss of some kind.

How might a brain injury lead to depression?

Depression is a common problem after brain injury. About half of all people with traumatic brain injury (TBI) are affected by depression within the first year after injury. Even more (nearly two-thirds) are affected within seven years after injury. More than half of the people with TBI who are depressed also have significant anxiety. Depression may appear after a brain injury because of 1) physical changes in the brain, 2) emotional response to the injury, and/or 3) factors unrelated to the injury.

Common symptoms of depression:

Symptoms of depression include:

- Feeling down, sad, blue or hopeless.
- ♦ Loss of interest or pleasure in usual activities.
- Feeling worthless, guilty, or that you are a failure.
- ♦ Changes in sleep or appetite.
- Difficulty concentrating.
- Withdrawing from others.
- ♦ Tiredness or lack of energy.
- Moving or speaking more slowly, or feeling restless or fidgety.
- ♦ Thoughts of death or suicide.

Feeling sad is a normal response to the losses and changes a person experiences after brain injury. However, prolonged feelings of sadness or not enjoying the things you used to enjoy are often key signs of depression.

Recommended strategies:

- If you have strong thoughts of suicide and have a suicide plan, call a local crisis line, 911, the 24-hour National Crisis Hotline at 800-273-8255, or go to an emergency room immediately.
- Antidepressant medications (such as SSRIs or SNRIs) work by helping to re-balance the natural chemicals in the brain that may have been altered by the brain injury.
- Psychotherapeutic (counseling) approaches (Cognitive Behavioral Therapy, and Behavioral Activation Therapy) are highly effective in treating symptoms of depression.
- Other treatment approaches such as exercise, acupuncture, biofeedback, and/or support groups can be additional sources of help.

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Do you feel drained of energy since your brain injury?

What does this mean?

After a brain injury, it is common to have fatigue. Fatigue is a feeling of exhaustion, tiredness, weariness or lack of energy. After a traumatic brain injury (TBI), you may have more than one kind of fatigue.

How might a brain injury cause fatigue?

Fatigue is one of the most common problems people have after a TBI. As many as 70% of survivors of TBI complain of fatigue after physical, mental or emotional exertion. You might experience an overwhelming tiredness that impairs your daily functioning (i.e., working full-time, driving, etc.) and feel mentally "drained" after just a short period of time when working on a task or dealing with a situation. Things that you used to be able to do without getting tired may now be exhausting after only a short time.

Common examples of fatigue:

- ♦ "After a while, I just can't concentrate anymore."
- ♦ "It's hard to stay focused."
- ♦ "My mind just goes blank."
- ♦ "I just get so tired doing even simple things now."
- I never had to take naps before."

Recommended strategies:

- Make a list of things that need to be done and when. List them in order of what should be done first. Break down activities into smaller steps.
- Solution Improve your time management. Take frequent breaks.
- Figuring out what steps you need to do first to complete an activity. Think of the end goal and work backwards.
- Do the more complicated or difficult tasks early in the day when you have the most energy and are mentally alert.
- \clubsuit Pay attention to what triggers your fatigue.
- \diamond Get more sleep and rest.
- Drink plenty of fluids and keep good nutrition.
- Set and keep a regular schedule.
- Alcohol and marijuana will generally make fatigue worse–avoid these substances.
- Caffeine (coffee, cola products) should be avoided after lunch if sleeping is a problem.
- Resume activities gradually; start with familiar tasks at home or work.
- Exercise daily.
- Talk to your doctor regarding possible medication recommendations if your fatigue does not improve.





Do you have trouble with headaches since your brain injury?

What does this mean?

Headaches are one of the most common symptoms after traumatic brain injury (often called "post-traumatic headache"). Over 30% of people report having headaches which continue long after injury.

Why are headaches common after a brain injury?

Headaches after a traumatic brain injury can be long-lasting, coming and going even past one year. Headaches can make it hard for you to carry out daily activities or can cause you to have more difficulty thinking and remembering things. Right after a severe traumatic brain injury, people may have headaches because of the surgery on their skulls or because they have small collections of blood or fluid inside the skull. Headaches can also occur after mild, moderate, or severe injury and after the initial healing has taken place. These headaches can be caused by a variety of conditions, including a change in the brain caused by the injury, neck and skull injuries that have not yet fully healed, tension and stress, or side effects from medication.

Common types of headaches:

Migraine, tension-type, cervicogenic, and rebound headaches.

Recommended strategies:

- ♦ Get enough sleep.
- Get daily exercise.
- Avoid caffeine.
- Avoid certain foods that may trigger a headache, like red wine, monosodium glutamate (MSG, a common food additive) or certain cheeses.
- Avoid taking pain medicines on a daily basis unless your health care provider prescribes it.

Common types of treatment for occasional headaches include:

- Over-the-counter pain medicines like Acetaminophen (Tylenol®) or ibuprofen, prescription medicines for migraine headache like sumatriptan (Imitrex®).
- Relaxation therapy/meditation, stretching, acupuncture, therapeutic massage, heat/ice packs.
- Biofeedback therapy or local injections.

Treatments for recurrent headaches that happen more than twice a week:

Your physician may prescribe antidepressants, antiseizure medicines, certain blood pressure medications, or botulinum toxin (Botox) injections.

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Do you have trouble with acting or speaking before you think?

What does this mean?

This involves an inability to control urges that can lead to impulsive and often inappropriate social behavior. For example, a previously shy person may become quite extroverted and talkative if the brain injury has led to a mild lack of inhibitions; they may say and do inappropriate things that they never would have done before the injury.

Most people do not understand that this problem is a common result of brain injury and they may take these actions and behaviors personally. This, in turn, often leads to conflicts, blaming and criticism from others. As a result, some impulsive brain injured individuals find that they are constantly having conflicts with those around them. They may alienate old friends, have trouble making new ones, and eventually become socially isolated and alone.

How might a brain injury lead to impulsivity?

A common outcome from a frontal lobe injury is lack of awareness. This can make it difficult for a person to recognize their problems, to analyze their behavior or to gauge other people's reactions to what they do. This complicates the issue of impulsivity as the person may not admit that they have a problem with impulsive and inappropriate behavior. They may be unable to understand their own limitations or the consequences of their actions. A person lacking in insight will also be unable to understand other people's behavior or motives, and unable to empathize or imagine how someone else is feeling.

Recommended strategies:

- Be aware if being impulsive is a weakness of yours. Sometimes just being aware will allow you to take a more cautious approach.
- Impulsivity often arises in situations where there is confusion or fearfulness. These can be minimized by a predictable daily schedule.
- Use a STOP and THINK approach to things that are known triggers, such as getting up too quickly from bed, walking too quickly, or saying the first thing that comes to mind.
- Consider putting up post-it notes in situations or places where there is a known issue, like on a cane or walker, etc.
- Set rewards for being able to use self-control, even for small things.
- The most common treatment is medication. You may also benefit from counseling. Consult your rehabilitation specialist or medical provider to see if medication or therapy can assist.
- Family members: Anticipate problems before entering a new situation. Provide gentle reminders and feedback when needed, along with praise for good behavior.

Sources: IU School of Medicine / Rehabilitation Hospital of Indiana TBI Model Systems; Synapse, Australia. Further, the information in this FACT SHEET is also based on a consensus of expert opinion of the Rehabilitation Hospital of Indiana Departments of Neuropsychology and Resource Facilitation. RHI Resource Facilitation Department 9531 Valparaiso Court • Indianapolis, Indiana 46268 Tel: (317) 329-2455 | Fax: (317) 872-0914





Do you have trouble with getting started on and completing tasks since your brain injury?

What does this mean?

"Initiation" is the ability to start doing something. It requires seeing what needs to be done, making a plan about how to start doing it, and putting the plan into action. For example, if a person wants to get dressed, they must first recognize the need to get dressed, plan what they will wear, and begin gathering clothing.

"Planning" is the ability to choose how to do a task, and to list all the steps of the task. Planning also requires the person to decide what they will need to do the task and estimate how long it will take them to complete it. For example, if a person wants to cook a meal, they must decide what they will cook, what ingredients they need, where they can get the ingredients, what time to start cooking, and how much to cook.

How might a brain injury affect initiation and planning?

Initiation, planning, and organization are thought of as "higher level thinking processes" because they require a lot of brain power. To initiate, plan, and organize, a person needs to be able to think ahead, concentrate, remember things, gather and sort information, and set priorities. If you have damage to the front of your brain, you may have problems with initiation, planning, or organization. This is because the front of the brain is the part most involved in planning, organizing, and problem solving.

Common examples of issues with initiation and planning:

- Difficulty starting tasks. Sitting in one place for long periods without thinking anything in particular.
- Difficulty with tasks that used to be easy, such as getting dressed or finishing a work assignment.
- Getting stuck and doing the same thing over and over. Having difficulty trying new ways of doing things, even if the old ones fail.
- Solution Difficulty doing more than one thing at a time.

Recommended strategies:

- Make a list of things that need to be done and when. List them in order of what should be done first.
- When figuring out what steps you need to do first to complete an activity, think of the end goal and work backwards.
- Make a plan for how to do them; break down tasks into small steps.
- Execute the plan and monitor how well you are doing.
- Schange your approach if it is not working out.

Sources: IU School of Medicine / Rehabilitation Hospital of Indiana TBI Model Systems; brainline.org. Further, the information in this FACT SHEET is also based on a consensus of expert opinion of the Rehabilitation Hospital of Indiana Departments of Neuropsychology and Resource Facilitation.

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Do you have trouble with irritability since your brain injury?

What does this mean?

Studies show that up to 71% of people with a brain injury have problems with frequent and inappropriate irritability. They may yell, use bad language, throw objects, slam fists into things, slam doors, or threaten or hurt family members or others. Family members often describe them as having a "short fuse", and "flying off the handle easily." If this was true before the injury, it is often worse afterwards.

Why might irritability increase after a brain injury?

Temper outbursts after brain injury are likely caused by several factors, including:

- Injury to the parts of the brain that control emotional regulation.
- Frustration and dissatisfaction with the changes in life brought on by the injury, such as the loss of a job and/or independence.
- Feeling isolated, depressed or misunderstood.
- Difficulty concentrating, remembering, expressing yourself or following conversations, all of which can lead to frustration.
- ♦ Tiring easily and pain.

Recommended strategies:

- Decrease stress and irritating situations can help reduce triggers.
- Counseling can help teach basic anger management skills, such as self-calming strategies, relaxation and better communication methods.
- Certain medications can be prescribed to help control temper outbursts.
- Family members can help by changing the way they react to the temper outbursts:
 - Understand that being irritable and getting angry easily is due to the brain injury. Try not to take it personally.
 - Do not argue with the injured person during an outburst. Instead, let him or her cool down for a few minutes first.
 - Do not try to calm them down by giving in to his or her demands.
 - Set some rules for communication. Let the injured person know that it is not acceptable to yell at, threaten or hurt others. Refuse to talk to the injured person when he or she is yelling.
 - After the outburst is over, talk about what led to the outburst. Encourage the injured person to discuss the problem in a calm way. When the person feels anger coming on, suggest other outlets, such as leaving the room, taking a walk, or using another relaxation strategy.

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Do you have trouble using language since your brain injury?

What does this mean?

When certain brain functions controlling the ability to use language are affected, a person might experience difficulties understanding what others are saying or putting their thoughts into words. They might be extremely frustrated at their inability to get their points across or to understand what people are telling them.

How might a brain injury affect communication?

Injury to certain parts of the brain can cause persons with traumatic brain injury to have difficulty understanding and expressing words and language. Problems of this type are called "aphasia." This can range from very mild, in which case it is only a little frustrating at times, to very severe, in which case it makes communication difficult or impossible.

Common examples of communication difficulties:

- Solution Difficulty thinking of the right word.
- $\boldsymbol{\diamond}$ Trouble following conversations or understanding what others say.
- Difficulty with more complex language skills, such as expressing thoughts in an organized manner. You know what you want to say, but the words come out wrong.
- Trouble communicating thoughts and feelings using facial expressions, tone of voice and body language (non-verbal communication).
- Having problems reading others' emotions and not responding appropriately to another person's feelings or to the social situation.
- Misunderstanding jokes or sarcasm.

Recommended strategies:

Work with a speech therapist to identify areas that need work. Communication problems can keep improving for a long time after the injury.

How family members or caregivers can help:

- Use kind words and a gentle tone of voice. Be careful not to "talk down" to the person.
- When talking with the injured person, periodically stop and ask if he or she understands what you are saying, or ask the person a question to determine if he or she understood what you said.
- \clubsuit Do not speak too fast or say too much at once.
- Develop a signal (like raising a finger) that will let the injured person know when he or she has gotten off topic. Practice this ahead of time. If signals don't work, try saying "We were talking about...."
- Limit conversations to one person at a time.

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FACT SHEET

Brain Injury & Managing Emotions

Do you have trouble with controlling your emotions since your brain injury?

What does this mean?

After a brain injury, people often have problems controlling and managing their emotions. In life, everyone is exposed to events and situations that can trigger strong emotions, such as, conflict in a relationship, a personal criticism, or a perceived loss. A person with problems managing emotions may react in an exaggerated manner to these challenges. This may take the form of angry outbursts, crying, or blaming and can lead to real turmoil in a household.

How might a brain injury affect emotion regulation?

Brain injury, especially if it occurs in the front part of the brain, can cause problems with managing emotions. This can take any number of forms including impulsivity, poor insight, lack of inhibition, impaired judgment, emotional explosions and depressive symptoms. Explosive anger, often directed at family members, is not at all uncommon after a brain injury, particularly in individuals in whom impulsivity, disinhibition, and emotional dysregulation are present.

Common examples of emotional dysregulation:

- Uncontrolled anger or rage, irritability, sadness or other manifestation of emotional instability.
- Negative impact on daily school or work life, and personal and family relationships.
- Poor cooperation with therapies, conflicts with others, especially family members, and resistance to current therapy.

Recommended strategies:

- Medication when indicated, coupled with effective individual counseling, sleep and stress management, and helpful education can significantly improve the quality of life of someone with emotional dysregulation.
- Certain kinds of group therapy can also be helpful with this problem and can teach clients how to take control of their lives, their emotions, and themselves through better understanding of their problems with emotional management and helping them to change their reactions to stressful situations.

Source: Psychological Care & Healing Treatment Center. Further, the information in this FACT SHEET is also based on a consensus of expert opinion of the Rehabilitation Hospital of Indiana Departments of Neuropsychology and Resource Facilitation.

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Do you have trouble with memory since your brain injury?

What does this mean?

Memory is the ability to store, retain, and eventually recall information. Problems with memory are one of the most common complaints after a brain injury. Memory impairments can often interfere with many aspects of life, including home, social, and work activities. Examples of frequently affected activities include: Keeping dates and appointments, taking medications, remembering to do chores or errands, recalling information from a book/TV show/movie, and recalling personal events and conversations.

How might a brain injury affect memory?

Memory impairments may range from mild to severe depending on what areas of the brain were injured and the extent of the injury. The good news is that there are some aspects of memory that are usually unaffected after a brain injury, and there are strategies that may help those areas that are affected. The following are some of the many different types of memory.

Common examples of memory difficulties:

- Short-term Memory: The ability to recall recently learned information. This is the most common type of memory affected after brain injury.
- Long-term Memory: The ability to remember information about something that happened a long time ago. This type of memory is generally not affected after a brain injury.
- Procedural Memory: The ability to remember skills and procedures. This is sometimes known as "how to" knowledge. Many skills can be practiced and rehearsed to the point that they become part of procedural memory and can usually be carried out automatically without too much thought. This type of memory usually remains intact after a brain injury; however, creating new procedural memories after brain injury may require more time and practice.

Recommended strategies:

- ♦ Pay attention.
- Limit distractions.
- ♦ Be an active learner.
- Practice.
- Visualize.
- ♦ Make an emotional connection.
- \diamond Understand the information.

- ♦ Link new information to something familiar.
- ♦ Group similar information.
- Relax and sleep.
- Security Exercise.
- ♦ Use memory aides.
- Sommunicate with your doctor.
- ♦ Challenge yourself.

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Do you have trouble with organizing your thoughts and *behavior* since your brain injury?

What does this mean?

Difficulty organizing behavior or thoughts is one of the most common results of a brain injury. Real-life situations are often not very organized and structured, so many brain injured people have to provide some organization for themselves in order to behave appropriately and to get things done. Problems in this area can result from a variety of underlying issues, including deficits in memory, attention and language.

How might a brain injury affect organization of behavior?

The upper frontal region of the brain, behind the forehead, controls planning and organization of thoughts and activities. The ability to sequence thoughts in a logical fashion and translate those thoughts into action involves communication between the front part of the brain and other brain areas. Whenever a part of this circuit is damaged, it can produce disorganized thinking and behavior.

Common issues with organization of behavior:

Individuals with a brain injury may have difficulty paying attention to the most important features of their environment, logically organizing and planning their behavior, and following through; they often have great difficulty behaving reasonably in situations which do not provide intense external support and structure.

Recommended strategies for persons with brain injury:

- Think through some possible scenarios before entering the situation and anticipate potential problems.
- Plan possible solutions to these problems, practice them beforehand and execute them when needed.

Recommended strategies for support persons:

- Think ahead about situations that might bring about confusion or poor judgment.
- Sive realistic, supportive feedback as you observe confused or inappropriate behavior.
- Establish verbal and non-verbal cues to signal the person to "stop and think." For example, you could hold up your hand to signal "stop," shake your head "no," or say a special word you have both agreed on. Practice this ahead of time.
- If undesired behavior occurs, gently intervene and provide corrective action so the individual can be aware of the problem.

Sources: IU School of Medicine / Rehabilitation Hospital of Indiana TBI Model Systems; Colorado Department of Education. Further, the information in this FACT SHEET is also based on a consensus of expert opinion of the Rehabilitation Hospital of Indiana Departments of Neuropsychology and Resource Facilitation.

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FACT SHEET

Brain Injury & Broblem-Solving/Decision-Making

Do you have trouble making decisions since your brain injury?

What does this mean?

The term "problem solving" is often used to describe how we deal with everyday difficulties. Yet, we do not often think about what the term means. What is problem solving? Problem solving means applying a set of rules to everyday problems to solve them more quickly and make decisions successfully. It involves several steps, including:

- ♦ Define the problem: identify the problem in a clear and definite manner.
- Brainstorming: generate lists of ideas for solving the problem, including the pros and cons of each possible solution.
- Try out solution: pick the solution with the most "pros" and fewest "cons" and try it out.
- Evaluate the outcome: determine if the solution worked to solve the problem; if not, try another solution.

How might a brain injury affect problem-solving ability?

- It is common to have problems with reasoning, problem-solving and judgment.
 - There may be difficulty recognizing when there is a problem.
 - There may be trouble analyzing information or changing the way they are thinking (being flexible or "thinking outside the box").
 - There may be difficulty deciding the best solution to a problem, or may get stuck on one solution and not consider other, better options.
 - Quick decisions may be made without considering the consequences, or the best judgment may not be used (e.g. impulsivity).

Recommended strategies:

A speech therapist or psychologist experienced in cognitive rehabilitation can teach an organized approach for daily problem-solving.

Work through a step-by-step problem-solving strategy in writing:

- Define the problem
- Brainstorm possible solutions
- List the pros and cons of each solution
- Pick a solution to try
- Evaluate the success of the solution
- Try another solution if the first one doesn't work

Ask a support person to help you with these steps if you have difficulty.

Sources: IU School of Medicine / Rehabilitation Hospital of Indiana TBI Model Systems; brainline.org, WETA. Further, the information in this FACT SHEET is also based on a consensus of expert opinion of the Rehabilitation Hospital of Indiana Departments of Neuropsychology and Resource Facilitation.

Disclaimer: This information is not meant to replace advice from a medical professional. You should consult your health care provider regarding specific medical concerns or treatments.





Do you have trouble with PTSD since your brain injury?

What does this mean?

Post-Traumatic Stress Disorder (PTSD) is an anxiety disorder that can occur after a person has been through a traumatic event. These events can include: Natural disasters, car crashes, sexual or physical assaults, terrorist attacks, and combat during wartime. During a traumatic event, a person's life or the lives of others may be in danger. They may feel afraid or feel that they have no control over what is happening. And if the person has a traumatic brain injury (TBI) too, these feelings of lack of control and fear can cause additional problems with confusion, memory, or intense emotions.

How might a brain injury affect PTSD?

More than 5 million people in the United States suffer from PTSD and it can often go hand-in-hand with TBI as the symptoms often overlap.

Common examples of PTSD:

Generally, symptoms of PTSD can occur when a person experiences unwanted and intrusive memories of the traumatic event, tries to avoid thinking about it, or is experiencing high levels of anxiety related to the event. Some of the most common symptoms include:

- Recurrent nightmares.
- ♦ "Flashbacks."
- Being *physically* responsive, such as experiencing a surge in your heart rate or sweating, to reminders of the traumatic event.
- ♦ Difficulty in falling or staying asleep.
- ♦ Irritability or outbursts of anger.
- Constantly "on guard", like danger is lurking around the corner.
- Avoiding thoughts, feelings, or conversations about the traumatic event.
- Going numb or having a loss of interest in previously enjoyed activities.
- Difficulties having positive feelings (i.e., happiness or love).

Recommended strategies:

Not all people who are traumatized develop PTSD; but for those who do, treatment brings hope. Sometimes counseling called cognitive-behavioral therapy (CBT) is effective; medicines known as SSRIs can help too, like Zoloft or Paxil. Sometimes a combination of both therapies proves successful.

Here are some strategies to help with PTSD:

- ♦ Find a therapist.
- ♦ Join a support group or other support services.
- ♦ Find a peer mentor.
- ♦ Meditate or use other relaxation strategies.

Sometimes PTSD, especially in conjunction with TBI, can lead to unhealthy behavior like substance abuse or taking unnecessary risks. Sharing experiences, feelings, and fears with others, whether with friends, family, or a professional, can lessen the burden.

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Do you have trouble with seizures since your brain injury?

What does this mean?

One of the problems that can occur after a traumatic brain injury (TBI) are seizures. Although most people who have a brain injury will never have a seizure, it is good to understand what a seizure is and what to do if you have one. Most seizures happen in the first several days or weeks after a brain injury. Some may occur months or years after the injury. About 70-80% of people who have seizures are helped by medications and can return to most activities. Rarely, seizures can make you much worse or even cause death.

How might a brain injury lead to seizures?

There are three types of seizures: Early post-traumatic seizures, late post-traumatic seizures, and epilepsy. The cause of the brain injury can help doctors figure out how likely you are to have seizures.

Statistics show:

- \bullet 65% of people with brain injuries caused by bullet wounds have seizures.
- ♦ 20% of people with 'closed head injuries' that cause bleeding between the brain and the skull experience seizures.
- Over 35% of people who need two or more brain surgeries after a brain injury may experience late post-traumatic seizures.
- Over 25% of people with bleeding on both sides of the brain, or who have a blood clot that must be removed by surgery, experience late post-traumatic seizures.

Recommended strategies:

- Talk to your doctor about medications that are used to control seizures called antiepileptic drugs (AEDs).
- If seizures continue even after trying medications, your doctor may refer you to a comprehensive Epilepsy Center for more tests and to be seen by special seizure doctors called epileptologists or neurologists specializing in epilepsy.
- In most states, if you have had a seizure you cannot drive and you must notify the department of motor vehicles (DMV). Usually you won't be able to return to driving for a period of time, or until your seizures have been completely stopped.
- Always have someone with you if you are in water.
- Solution Don't climb on ladders, trees, roofs or other tall objects.
- Let people who eat with you know what to do if you have a seizure and start to choke.
- Educate yourself and your caregiver(s) on a Seizure Response Plan (visit <u>www.efa.org</u> to learn more) to know what can be done to protect yourself from harm.

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Brain Injury & Sensory Hypersensitivity

Do you have trouble with sensitivity to light 0r noise since your brain injury?

What does this mean?

Everybody takes in information with their senses, but sometimes after a traumatic brain injury (TBI), our ability to process all of this information becomes more difficult, whether it is visual, auditory or tactile.

How might a brain injury affect sensory hypersensitivity?

If it seems like your sense of touch, taste, smell, hearing, or vision is extra sensitive or heightened after your brain injury, it's not your imagination. Sensory hypersensitivity is a major, yet not as obvious, contributor to fatigue and overload after a brain injury.

Pain and fatigue can intensify sensory hypersensitivities, making you particularly sensitive and reactive to sensations. At these times, you can become overstimulated and super-aware of what is going on around you. Sights and sounds that didn't bother you before may now trigger anxiety and the "fight-or-flight" response where you begin to feel threatened and out of control. You may feel like shutting down and not be able to do any more. Or you may feel compelled to escape from the situation.

Common examples of sensory hypersensitivity:

- Sounds that you barely noticed before can alarm and startle you.
- ♦ It feels like you have megaphones in your ears.
- Solution Background sounds and stimulating environments become overwhelming.
- Fluorescent and bright lights can cause headaches.
- Solution Clothing that was comfortable before, now feels irritating.
- ♦ Large gatherings of people feel overwhelming.

Recommended strategies:

Stress management, movement, and use of all senses can help the brain organize and integrate the senses. This is similar to what children do. Consider how physically active children are as they grow and develop! Try these tips:

- ♦ Limit exposure to avoid sensory overload.
- Monitor pain, stress and fatigue levels.
- Try to avoid nicotine, caffeine and alcohol.
- At the start of feeling stressed or anxious, try incorporating another sense, such as finger painting (sense of touch) or cooking (sense of taste).
- Experiment with activities and alternative therapies that involve your senses, such as aromatherapy.
- Meditate.
- Seek professional consultation with your physician.

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Do you have trouble with sexuality since your brain injury?

What does this mean?

The following changes in sexual functioning can happen after a brain injury:

- **Decreased Desire:** Many people may have less desire or interest in sex.
- Increased Desire: After brain injury, people may want to have sex more often than usual. Others may have difficulty controlling their sexual behavior. They may make inappropriate sexual advances or sexual comments.
- Decreased Arousal: Many people have difficulty becoming sexually aroused. This means that they may be interested in sex, but their bodies do not respond.
- Difficulty or Inability to Reach Orgasm/Climax: Both men and women may have difficulty reaching orgasm or climax.
- Reproductive Changes: Women may experience irregular menstrual cycles or periods. They may also have trouble getting pregnant. Men may have decreased sperm production and may have difficulty getting a woman pregnant.

How might a brain injury affect sexuality?

- Damage to the areas of the brain that regulate sexual desire/arousal.
- Hormonal changes.
- \clubsuit Medication side effects.
- ♦ Fatigue/Tiredness.
- Problems with movement.
- ♦ Loss of self-esteem or change in self-image.
- Changes in thinking abilities.
- Semotional difficulties.
- Changes in relationships and social activities.

Recommended strategies:

- Talk with your doctor.
- \diamond Get a comprehensive medical exam.
- Solution Consider psychotherapy or counseling, couples therapy, and/or sex therapy.
- ♦ Plan sexual activities during the time of day when you are less tired.
- When having sex, position yourself so that you can move without being in pain or becoming off balance.
- Arrange things so that you will be less distracted during sex.
- There are sexual aids developed to help people with disability. A good website for these is: www.Mypleasure.com/education/disability/index.asp.
- ♦ Most importantly, practice safe sex:
 - After a TBI, it is just as important for you to protect yourself from unplanned pregnancy and from sexually transmitted disease as it was before your injury. Even if a woman's period has not returned, she can still get pregnant.

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Do you have trouble with sleep since your brain injury?

What does this mean?

Many people who have brain injuries suffer from sleep disturbances. Not sleeping well can increase or worsen depression, anxiety, fatigue, irritability, and one's sense of well-being. A review of studies and surveys suggest that sleep disorders are three times more common in traumatic brain injury patients than in the general population and that nearly 60% of people with traumatic brain injury experience long-term difficulties with sleep. Women are more likely to be affected than men. Sleep problems are more likely to develop as the person ages.

How might a brain injury affect sleep?

Physical and chemical changes in the brain, changes in breathing control, side-effects of medications, daytime sleeping (napping) and physical inactivity, presence of pain and/or depression, and use of alcohol, caffeine and/or nicotine all affect one's sleep pattern.

Common examples of sleep difficulties:

- ✤ Insomnia: Difficulty with falling asleep or staying asleep; or sleep that does not make you feel rested. Insomnia can worsen other problems resulting from brain injury, including behavioral and cognitive (thinking) difficulties. Insomnia makes it harder to learn new things. Insomnia is typically worse directly after injury and often improves as time passes.
- Excessive Daytime Sleepiness: Extreme drowsiness.
- **Delayed Sleep Phase Syndrome:** Mixed-up sleep patterns.
- Narcolepsy: Falling asleep suddenly and uncontrollably during the day.

Recommended strategies:

- \clubsuit Set an alarm to try to wake up at the same time every day.
- \clubsuit Exercise every day.
- Don't nap more than 20 minutes during the day.
- Try to go to bed at the same time every night.
- Avoid caffeine, nicotine, alcohol and sugar for five hours before bedtime.
- ♦ Keep stress out of the bedroom.
- Talk to your doctor to explore safe and effective treatments and/or medications.
- Non-pharmacological therapies (i.e., psychotherapy [counseling], relaxation therapy, use of special bright lights [phototherapy]).
- Natural remedies (herbal teas, melatonin and valerian).

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FACT SHEET

Brain Injury & Social Communication

Do you have trouble expressing your thoughts and feelings t0 others since your brain injury?

What does this mean?

Social communication involves sending and receiving messages to and from others: Being able to understand others and what others meant to communicate and being able to express your thoughts and feelings to others in a way they can understand.

Social communication includes many skills, both verbal and nonverbal.

Social communication must be adjusted for the situation: A person needs to adjust how they communicate depending on the situation and the persons involved. This includes the physical setting, the social demands of the situation, and one's relationship to person(s).

How might a brain injury impact affect social communication?

- Solution Impairment is common following moderate to severe traumatic brain injury (TBI).
- Problems result from both cognitive and personality changes that can be caused by injury to the brain.
- Other factors such as pre-injury ability, emotional reactions to disability, and environmental factors may also contribute to social communication difficulties after injury.

Common examples of social communication problems:

- ♦ Inability to read other people's feelings or thoughts.
- $\boldsymbol{\diamond}$ Not understanding how you come across to others.
- \clubsuit Trouble understanding sarcasm or jokes.
- Talking too much; not listening or taking turns.
- ♦ Interrupting others.
- Saying things that others find rude or inappropriate.
- Showing insensitivity to the feelings of others.
- Soing off on tangents; losing track of the topic.

Recommended strategies:

- Practice with your caregiver (role-play and rehearse) appropriate examples of social communication.
- If you are in the middle of a conversation and sense inappropriate social communication, let the person know you hear what they're saying, but you notice yourself becoming agitated and take a "time out." Or use a STOP and THINK approach to your triggers.
- ♦ Use empathy. Try to see things from the other person's point of view.
- Seek positive feedback from your caregiver when you communicate appropriately, and remember to reward yourself often too.

Source: TIRR Memorial Hermann Rehabilitation & Research. Further, the information in this FACT SHEET is also based on a consensus of expert opinion of the Rehabilitation Hospital of Indiana Departments of Neuropsychology and Resource Facilitation.

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Do you have trouble managing stress since your brain injury?

What does this mean?

Following a brain injury, it is quite common for people to experience a great deal of stress. A little stress is part of life, but stress that goes on for a long time can have a negative effect on the mind and body. Chronic stress can also be caused by other problems including medical problems, such as heart disease, cancer, and stroke.

- Stress can affect the ability to concentrate, to be organized, and to think clearly.
- Stress also has a negative effect on relationships with other people because it can make you irritable, less patient, and more likely to lash out.
- Stress can lead to depression and/or anxiety.

How might stress affect my recovery after a brain injury?

If you are under constant stress, you are not going to be as helpful to yourself and your loved ones. *If you do not take the time to rest and care for yourself, you will get fewer things done, which will lead to more stress.*

Recommended strategies:

- \clubsuit Learn to relax.
 - o Breathe deeply and focus on breathing.
 - State a word or phrase that has positive meaning (e.g. "peace").
 - Use visual imagery.
- ♦ Learn which coping strategies work best.
 - o Be open to trying new ways of coping and find out what works.
 - o Practice often.
 - Coping strategies others have found helpful:
 - Take time for yourself.
 - Keep a regular schedule for yourself.
 - Get regular exercise such as a 20-30 minute walk each day.
 - Participate in support groups.
 - Maintain a sense of humor.
 - Be more assertive about getting the support you need.
 - Change roles and responsibilities within the family.
 - Consider going to a counselor or therapist to talk about the stress and learn strategies to deal with it.

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Do you have trouble with substance abuse since your brain injury?

What does this mean?

Substance use after brain injury can include alcohol, illicit drugs, and/or abuse of prescription medications. The effects of these substances on the brain after an injury can impede recovery.

How might use of substances affect recovery after a brain injury?

There are many reasons why using drugs and alcohol after a brain injury is not recommended:

- ♦ People don't recover as well.
- Brain injuries cause problems in balance, walking, or talking that get worse when a person uses alcohol or other drugs.
- After brain injury, people often say or do things without thinking first—a problem that is made worse by using alcohol and other drugs.
- Brain injuries cause problems with thinking, like concentration or memory, and using alcohol or other drugs makes these problems worse.
- Alcohol and other drugs have a more powerful effect on the brain after injury.
- After brain injury, people are more likely to have times that they feel low or depressed, and consuming alcohol and other drugs makes this worse.
- Drinking alcohol or using other drugs can cause a seizure.
- People are more likely to have another brain injury if they are abusing substances.

Recommended strategies:

People with brain injuries and their families should know that there are treatments and strategies out there, and ones that can be very effective. Some of them include:

- ♦ Attending a support group.
- ♦ Learning to cope with cravings.
- Setting realistic goals.
- Building self-esteem.
- Medication.
- Seek professional help.

It's crucial for people to get treated for both the traumatic brain injury (TBI) and the addiction simultaneously and by someone who knows about both. Seek out programs where there is collaboration and communication between the brain injury treatment providers and the substance abuse treatment providers.

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Do you have trouble with vision since your brain injury?

What does this mean?

We often think about vision as being simply what we see. However, vision also includes how our brains make sense of what we see. Vision also helps other systems in the body work well; these include the systems for thinking and moving. When the visual system is not working properly, it can have a wide-ranging impact on daily living activities (e.g., reading, driving, employment, school, and recreational activities) and quality of life.

How might a brain injury affect vision?

Depending on its location and severity, a traumatic brain injury can affect your vision by damaging parts of the brain involved in visual processing and/or perception (e.g., cranial nerves, optic nerve tract or other circuitry involved in vision, occipital lobe).

Common examples of vision difficulties:

There are a variety of visual problems that can occur at different time points in your recovery. Some of the most common types of vision problems include:

- Solurred vision, especially with seeing up close.
- Solution Double vision.
- Decreased peripheral vision.
- Complete loss of vision in one or both eyes (depending on the injury).

Recommended strategies:

- Take breaks often when doing tasks that rely on vision.
- ♦ Magnify objects.
- Solution Increase contrast. An object that stands out from the background will be easier to see.
- Reduce glare.
- Avoid visual overload. Cut down on clutter at home and at work. Try to keep all items needed to complete a task together in one place. Designate one storage place for a frequently used item. This will help to not become overwhelmed by visual information.
- For those with complete vision loss, devices such as talking timers, alarm clocks, microwaves, thermometers, tactile dots, screen-reading software for computers, talking books, various mobile phone apps, and mobility canes may be helpful. Learning Braille may also be helpful.
- Evaluation by a neuro-optometrist or vision rehabilitation therapist may also be needed. The Bosma Center in Indianapolis is also a good resource for severe visual impairment.

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Do you



Memory Skills

have trouble holding information in mind for reasoning and learning since your brain

injury?

What does this mean?

Working memory involves the ability to hold information in your mind and to keep it there long enough to perform some operation or to manipulate it in some way. Most tasks of everyday functioning involve an aspect of working memory abilities.

How might a brain injury affect working memory skills?

Working memory skills are needed when we must mentally recall, manipulate, and transform information. A number of problems can cause difficulty with working memory, including anxiety and/or impaired memory storage ability that result from a brain injury.

Common examples of working memory problems:

- Unable to repeat a series of numbers backward.
- Unable to hold on to information long enough to use it.
- Struggle to concentrate in order to follow instructions.
- Notice difficulties in many different subject areas, mainly reading and math.

Recommended strategies:

Identify specific working memory impairments through comprehensive neuropsychological testing/assessment. If diagnosed with working memory impairment, there are different strategies that can be taken:

- Know your limitations, anticipate problems and plan ahead in case you run into trouble.
- ♦ Get rid of distractions.
- Solution while engaged in the task.
- Practice and rehearse what is needed beforehand.
- ♦ Pace yourself. Go slow if needed.
- Write information down to help keep it straight while working with it.
- Check to see how well you are doing and ask for feedback.
- Change your approach if it doesn't seem to be working.

Source: Intervention of Short-Term and Working Memory Impairments in Closed-Head Injury: A Literature Review, Irene H. Kim, Craig Hospital, Englewood, CO. Further, the information in this FACT SHEET is also based on a consensus of expert opinion of the Rehabilitation Hospital of Indiana Departments of Neuropsychology and Resource Facilitation.

RF FACT SHEETS

Brain Injury and Alcohol Brain Injury and Attention-Concentration Brain Injury and Awareness Brain Injury and Balance Brain Injury and Depression Brain Injury and Fatigue Brain Injury and Headaches Brain Injury and Impulsivity Brain Injury and Irritability Brain Injury and Initiation and Planning Brain Injury and Language Brain Injury and Managing Emotions Brain Injury and Memory Brain Injury and Organization of Behavior Brain Injury and Problem-Solving/Decision-Making Brain Injury and **PTSD** Brain Injury and Seizures Brain Injury and Sensory Hypersensitivity Brain Injury and Sexuality Brain Injury and Sleep Brain Injury and Social Communication Brain Injury and Stress Brain Injury and Substance Abuse Brain Injury and Vision Brain Injury and Working Memory Skills