

Traumatic Brain Injury for VR Counselors

Margaret A. Struchen, Ph.D. and Laura M. Ritter, Ph.D., M.P.H.

Training Session 2a: Somatosensory Changes that May Occur Following TBI, Impact on Vocational Issues, and Strategies to Address these Changes

- [Headaches \(Mild, Moderate/Severe\)](#)
- [Fatigue \(Mild, Moderate/Severe\)](#)
- [Dizziness \(Mild, Moderate/Severe\)](#)
- [Blurred/Double Vision \(Mild, Moderate/Severe\)](#)
- [Visual Field Cut \(Moderate/Severe\)](#)
- [Sensitivity to Noise and/or Light \(Mild, Moderate/Severe\)](#)
- [Trouble with Tasting or Smelling \(Moderate/Severe\)](#)
- [References](#)



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Headaches (Mild, Moderate/Severe):

Headaches are a frequent problem after TBI. These are called *post-concussive* or *post-traumatic headaches*. The pain may be constant, or may come and go over time. Pain can vary from mild to severe. Headaches are one of the more common problems experienced after a mild TBI, but persons with moderate to severe TBI may also experience headaches. They often go away after a few weeks. Sometimes, though, headaches can be a more long-lasting problem.

There are two types of headaches that can happen after a head injury. These are called *tension headaches* and *vascular headaches*.

- **Tension headaches:** These headaches are the most common. They happen when an individual is under stress. They may also happen when the muscles in the neck, shoulders, or jaw are tight. When this happens, pain can transfer to the head. Tension headaches feel like a dull, steady pain. These types of headaches can last for a long time, but they don't have to be a long-lasting problem. Relaxation may help to get rid of tension headaches.
- **Vascular headaches:** These kinds of headaches are sometimes called migraine headaches. They happen because of problems with the blood vessels around the brain. These kinds of headaches often include throbbing pain. This pain can be on one side or both sides of the head. Associated problems, like nausea and vomiting, can occur. Many people find that bright lights and loud noises make a vascular headache feel worse. Migraine or vascular headaches may last only a short time or may last for many hours.

How might headaches impact vocational success?

Headache pain can serve as a source of distraction, and as such, your client might find it difficult to focus on his or her work when experiencing a headache. Headache pain might also lead to increased irritability and depressed mood. Severe, chronic headaches could complicate your client's ability to work his or her specified scheduled and as a result, he or she may miss work frequently.

What strategies may be helpful to my client in managing headaches to facilitate vocational success?

- Encourage your client to discuss his or her headaches with a physician. This can be an important step in beginning to manage headaches, which may lead to a better



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understanding of the cause of the headache as well as a potential treatment with medications, if appropriate. If medications are prescribed, encourage your client to take medications for headache pain as prescribed.

- Stress can sometimes cause headaches. Encourage your client to look for triggers or situations in everyday lifelike that may lead to headaches. To this end, your client might want to keep a log that records information on events that were occurring prior to the onset a headache. This might help your client in identification headache triggers.
- Relaxation exercises, such as slow, regular, deep breaths or imaging yourself in a special, relaxing place, can help to lessen the effects of a headache. Your client may be able to teach him or herself these techniques by using a CD that guides a person through a relaxation exercise. You may also wish to refer your client to a mental health provider to learn relaxation strategies.
- When at the workplace and your client feels the start of a tension headache, encourage him or her to massage and/or place a warm towel his or her head and neck.
- If fatigue from sustained concentration in the work setting is a trigger for headaches, it would be helpful for your client to try to structure his or her work day to allow for regular rest breaks.
- Loud noises can help cause headaches. If your client identifies loud noises as related to the onset of his or her headaches, you may consider working with your client's employer to arrange for seating in a quiet part of the office.

[Return to top](#) or [Continue](#)



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Fatigue (Mild, Moderate/Severe):

Fatigue is a common problem for all levels of severity of TBI. Fatigue following TBI may not be anticipated, and can contribute to increased difficulties with thinking abilities. When fatigued, persons with TBI may be more likely to be stressed, and may notice a greater likelihood of experiencing headaches, dizziness, poor concentration, and/or irritability. Problems with fatigue tend to improve over time; however, individuals with TBI may require more sleep than was typical pre-injury.

How might fatigue impact vocational success?

Signs of fatigue at the workplace include difficulty focusing thoughts later in the day, feeling tired as the day progresses, and fighting the urge to fall asleep in the early afternoon. Co-workers may notice that your client appears drowsy or briefly nods off during afternoon meetings. Also, your client or others around your client might also report that he or she quickly becomes stressed or frustrated.

What strategies may be helpful to my client in managing fatigue to facilitate vocational success?

While problems with fatigue often improve over time, your client might continue to experience fatigue as he or she transitions back into the workplace.

- You might consider working with your client to identify a job that allows for reduced working hours or flexible working hours. Or, alternatively, you may need to work with your client and his or her employer to develop a reduced or flexible work schedule. For example, your client may work only four hours a week, for three days a week when he or she first starts or returns to a job. After three to four weeks, days of a week worked could be increased to four or five days or number of hours per day could be increased to six hours. As his or her fatigue improves, the hours that he or she works is gradually increased to match his or her endurance level.
- It is important to remind your client and his or her employer not to overexert. If your client feels as if he or she has a lot of energy one day, it is important not to overdo it that day, as he or she might be extremely tired during the following days. During the early phases of recovery, it is especially important to stop an activity prior to feeling fatigue, since once fatigue sets in, performance ability can quickly drop off.
- Other strategies to address fatigue might include scheduling frequent breaks into your client's day after an hour or two of work.



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- If your client appears to have more energy during a specific part of the day, encourage him or her to prioritize and complete more cognitively demanding work during that time period. It is important to remind your client of the link between increased fatigue and subsequent poor concentration and irritability.
- If your client reports trouble with sleeping at night, which may be contributing to daytime fatigue, encourage them to talk to their doctor about medications that could help.
- As a means of support and understanding, remind your client and his or her workplace that feeling tired is normal after injury and fatigue often improves with time.

[Return to top](#) or [Continue](#)



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Dizziness/Balance (Mild, Moderate/Severe):

Some people may feel dizzy after a TBI. An injury to the head can change how the inner ear works. Problems with the inner ear or its connections to the brain can cause dizziness and/or balance problems. Loss of balance, nausea, ringing in the ears, and headaches are often associated with these inner ear problems. Dizziness is fairly common after a mild TBI, but tends to improve over the first few months. For those with more severe TBI, dizziness may also occur and may be somewhat longer lasting. There are treatments for certain causes of dizziness.

How might dizziness or balance problems impact vocational success?

Restriction from certain jobs, such as those involving climbing or other mechanical tasks (or from aspects of certain jobs), may result due to dizziness or balance problems. If safety issues are at stake, the job duties may need to be renegotiated or a different job may be indicated. A thorough evaluation to determine the extent of the dizziness/balance problem and its impact on possible job performance would be recommended.

What strategies may be helpful to my client in managing dizziness/balance problems to facilitate vocational success?

- If your client is experiencing dizziness, it is a good idea to encourage him or her to talk with a physician. Your client might be subsequently referred to an ear, nose, and throat specialist for assessment and/or receive a referral for specialized physical therapy to address dizziness.
- If your client is continuing to experience dizziness when he or she is ready to return to work, it is recommended that you and your client identify how his or her dizziness might impact his or her safety when at work. For example, if your client is frequently climbing ladders while at work, he or she would want to refrain from doing so in order to maintain his or her safety. Your client might need to talk to his or her physician about the need for restrictions from certain activities when released to work and continuing to experience dizziness. Job duties may need to be renegotiated to avoid tasks that tax balance or dizziness for safety reasons. If the specific job responsibility loads heavily on intact balance, a different job may be indicated.

[Return to top](#) or [Continue](#)



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Blurred or Double Vision (Mild, Moderate/Severe):

After TBI, some individuals experience changes to their vision, including blurred or double vision. For most people, such visual changes tend to improve over time. Sometimes an evaluation by a neuro-ophthalmologist or neuro-optometrist may need to be conducted.

How might blurred or double vision impact vocational success?

If your client is experiencing blurred or double vision, he or she may notice that his or her eyes tire more easily. Eye strain and eye fatigue could lead to headaches. Blurred or double vision might also preclude your client from being able to work in a position that requires him or her to look at a computer monitor for extended periods of time or frequently complete tasks that require a good amount of visual detail, such as data entry. Find out if your client has any activity restrictions due to visual problems (for example, restriction from driving or some sporting activities).

What strategies may be helpful to my client in managing blurred or double vision to facilitate vocational success?

- Blurred vision can sometimes increase with fatigue. Encourage your client to schedule rest breaks and the pace of activities to help reduce the occurrence of blurred or double vision.
- Alternating between tasks that require intensive visual effort (such as looking at information on a computer screen) and those with little to no visual involvement (e.g., talking on the phone, etc.) may also reduce the amount of eye strain and fatigue experienced by your client within the workplace.
- Evaluation by a neuro-ophthalmologist or neuro-optometrist may be helpful. Changes in vision may require the use of corrective lenses or in a modification of the prescription for previously used glasses or contact lenses.

[Return to top](#) or [Continue](#)



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Visual Field Cut (Moderate/Severe):

If the injury causes damage to the optic nerve (the nerve from the eye to the brain) or to visual tracts within the brain (pathways that carry visual information within the brain), a visual field cut may occur. A field cut means that a part of visual space is not being perceived because the pathways by which visual sensory information is relayed to or within the brain have been damaged. For example, some persons may not be able to see information that is on the right side of space from either eye (right visual field cut).

How might visual field cuts impact vocational success?

Co-workers or your client's supervisor might report that when a customer approaches your client on the same side as his or her field cut, your client does not realize that a customer is approaching him or her. Your client might also bump into office furniture that is located on the same side as his or her field cut. Your client might miss notes or information that is written in areas of a paper that are on the same as his or her field cut. Find out if your client has any activity restrictions due to visual problems (for example, restriction from driving or some sporting activities). Your client might have limitations on the type of work he or she can return to, as a result of his or her field cut. For example, a client with a visual field cut might not be able to return to a job that is contingent upon him or her driving, such as working as a truck driver.

What strategies may be helpful to my client in managing visual field cuts to facilitate vocational success?

- If your client has received treatment from an occupational therapist or rehabilitation provider, request information on the strategies taught to your client to compensate for his or her visual field cut and reinforce these strategies with your client. For example, if your client has been taught to scan all the way to the right side of a piece of paper when reading, compliment him or her when you see your client utilizing this strategy. If you are at the work place and your client does not appear to be scanning to the side of the visual field cut when reading or entering a room, gentle remind and encourage him or her to do so.
- If he or she has not already received services, you may wish to refer your client for comprehensive rehabilitative services to learn scanning strategies and other compensation techniques.



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- Work with your client to arrange his or her work space so that workplace to be more conducive to the visual field cut. For example, important features of the workplace, such as doorways, computers, telephones, and supplies, should be arranged so that they are more likely to be in the client's functional visual space. In addition, arranging the client's workspace so that customers or co-workers will be approaching the client on his or her good visual hemi-field may ease his or her comfort level and responsiveness to others.
- It is recommended that you work with your client to arrange his or her work space so that important features of the area, such as doorways, telephones, and supplies are in his or her functional visual space. In addition, arranging the client's workspace so that customers or co-workers will be approaching the client on his or her good visual hemi-field may ease his or her comfort level and responsiveness to others.
- You might also wish to provide education to your client's supervisor and colleagues to not approach your client from the direction of his or her visual field cut.
- Encourage your client to talk with his or her doctor about changes in his or her vision, if this has not already been done. In some cases, visual orthotics may be recommended. Evaluation with a neuro-ophthalmologist or neuro-optometrist would be recommended.

[Return to top](#) or [Continue](#)



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Sensitivity to Noise and/or Light (Mild, Moderate/Severe):

After a TBI, some people find that they are sensitive to noise and/or to light. For example, if working in a noisy setting, like a crowded cafeteria, or in a setting with bright lights, like the fluorescent lights of a hospital or the flashing lights of a dance club, they may feel overwhelmed and uncomfortable. Your client might report that he or she prefers to be in the office when there is less noise going on around him or her and that he or she likes to eat lunch alone in a quiet place

How might sensitivity to noise and/or light impact vocational success?

Discomfort and a feeling of being overwhelmed related to noise and/or light sensitivity could serve as a source of distraction for you client. Your client could become more focused on his or her internal reactions to the light and/or noise and less focused on their work, leading to a greater likelihood of errors. If the noise and/or light becomes too overwhelming, your client might try to avoid coming to the workplace or engaging in noisy, work-related activities.

What strategies may be helpful to my client in managing sensitivity to noise and/or light to facilitate vocational success?

- Reduce your client's exposure to noise, if possible, by strategies such as moving the client's workspace to a less noisy area, closing office doors, altering office hours to less noisy time periods, and the like. The extent to which such strategies can be implemented will depend on the work setting and job duties.
- If appropriate for the type of work and workplace setting of your client, perhaps he or she could wear noise-reduction or noise-cancelling headphones when working independently.
- When visiting your client's work place, identify quiet places for taking a break or eating lunch.
- If your client is experiencing sensitivity to light, request that lights in and around their workplace be incandescent rather than fluorescent. Your client might also want to consider wearing sunglasses while indoors.

[Return to top](#) or [Continue](#)



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Trouble with Tasting or Smelling (Moderate/Severe):

Damage to sensory fibers that relay olfactory (smell) information to the brain can occur with a brain injury. The olfactory system is located on the underside of the frontal lobes of the brain and is an area that can be vulnerable to injury. Since the sense of smell is important to our sense of taste, both senses can be affected. Individuals may complain of foods not tasting the same or of needing to add more spices to their food. Some may not be able to smell things like food burning on the stove, leaking gas, or smoke from a fire, so this can be a major safety issue.

How might trouble with taste/smell impact vocational success?

Jobs that are contingent upon a strong sense of taste or smell, such as a chef, restaurant critic, or gas line repair person, could pose challenges to job return or job placement for the client with changes to his or her sense of taste and/or smell. Safety issues may be present in many work settings, since the ability to detect odors like smoke, natural gas, etc. may place the client in danger.

What strategies may be helpful to my client in managing difficulties with taste and/or smell to facilitate vocational success?

- If your client works in food preparation or related work, it may be necessary to work with co-workers to assist in “tasting” dishes that are prepared to ensure proper quality. If this is not possible, it may be necessary to consider modifications to the client’s job, such as focusing on service rather than food preparation, or changing to a job working with initial preparations (chopping vegetables, fruits, etc.) rather than completing final recipes.
- Encourage your client’s employer to install smoke alarms and carbon monoxide detectors within the workplace, if this is not already present. If such alarms are in place, it might be a good idea to confirm that the office smoke alarm has been recently inspected and in working condition.
- If the client’s sense of smell is a critical aspect of his workplace due to safety issues, such as may take place in a chemical plant or refinery, a thorough job analysis may help determine in what ways the job may need to be modified or if the client may need to work in an alternate setting.



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[Return to top](#) or [Continue to Training Session 2b](#)



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