

Information that will help you deposing doctors

Although brain injuries are similar in many ways: cell death, slower mentation, chemical imbalances, each brain injury is by definition different from any other injury because:

1. Brains are very complex;
2. No brain is exactly the same; and
3. No brain will be impacted in exactly the same way

I have included several good articles, government published informational pamphlets and listed a number of links to short informational videos about brain injuries and the effects they have on the individuals who experience them to help you become acquainted with some of the issues you will face representing brain injured clients.

I use some of the information in these articles during depositions. I have chosen some of the most used facts to dispute defense allegations and referenced where you can find them in the materials. These are:

1. A person need not hit their head on anything, or suffer a direct blow to the head to sustain a brain injury. Think “Shaken Baby Syndrome,” which describes brain injury resulting from shaking and doesn’t involve a direct impact to the head. It involves a sudden change in the status of the head, whether that be through the sudden change of momentum as occurs at the end of a fall, during an auto accident, or an actual impact to the head.

This defeats the argument that a person could not have sustained a concussion because they did not hit their head or did not have evidence of a cut or bruise to their head.

In the attached pamphlet, “*Heads Up, Facts for Physicians About Mild Traumatic Brain Injury*” published by the U.S. Department of Health and Human Services at page P. 2, “An MTBI (Mild Traumatic Brain Injury) is defined as a complex patho-physiologic process affecting the brain, induced by traumatic biomechanical forces secondary to direct **or indirect forces** to the head. MTBI is caused by a blow or jolt to the head that disrupts the function of the brain. **This disturbance of brain function is typically associated with normal structural neuroimaging findings** (i.e., CT scan, MRI). MTBI results in a constellation of physical, cognitive, emotional

and/or sleep-related symptoms and may or may not involve a loss of consciousness (LOC). Duration of symptoms is highly variable and may last from several minutes to days, weeks, months, or even longer in some cases” (Emphasis added.)

These facts can be used to confront a doctor who says that because the person did not hit their head there can be no “head injury” *per se*. It also can be used to try to educate obstreperous defense counsel and uninformed judges.

2. A person need not lose consciousness to have sustained a concussion or brain injury. Only a very uninformed or very biased medical professional will still maintain that an individual must lose consciousness to have suffered a brain injury/concussion. Unfortunately, this myth is still believed by some lay persons. The “*Heads Up*” article at page 6 states, “(Note: Research indicates that up to 90% of concussions do not involve LOC.)” Many people do not believe this when they first hear it. This fact can be used to educate judges and others who may still believe that a person must lose consciousness to sustain a concussion.
3. To repeat: A so-called “mild” traumatic brain injury is associated with **normal** structural neuroimaging findings such as the CT scan and MRI. This means that normal scans do not rule out the fact that your client may have sustained a so called “mild” brain injury. In fact they help define the injury as “mild”. (“*Heads Up*”, *supra*, at page 2). At this point in time, if you run into a doctor who actually contends that a normal MRI or CT means that the individual did not sustain a brain injury, you will know that that particular doctor is either woefully poorly informed or lying to you. I recommend you get his/her opinion in writing and request the doctor’s opinions be dismissed as insubstantial evidence. You can confront doctors with this evidence and see if they change their minds.
4. Another myth of the so-called “mild traumatic brain injury” is that the symptoms arising from a “mild” injury will be “mild” and should heal within a short period of time. **This is nonsense**. If you have an honest doctor, she/he will agree that a “mild traumatic brain injury” can have catastrophic life-long consequences. Medical research documents that 10-

20% of the people who suffer a so called “mild” traumatic brain injury will suffer life-long consequences.

The *Heads Up* pamphlet at page 2 states, “MTBI symptoms may appear mild, but **can lead to significant, life-long impairment** affecting an individual’s ability to function physically, cognitively, and psychologically. Appropriate diagnosis, referral, and patient and family/caregiver education are critical for helping patients with TBI achieve optimal recovery and to reduce or avoid significant sequelae.” (Emphasis Added.)

You can also refer to the attached article, “*Fatigue after TBI: Association with neuroendocrine abnormalities*” in *Brain Injury*, June 2007, 21(6): 559-566. This article, at page 559 notes that problems with endurance and fatigue increased substantially over the first year after the injury. This again disputes the traditional assumptions that all injuries, including brain injuries heal over time.

The authors postulated at 559-560 that “Fatigue may also underlie many of the sequelae of chronic TBI, in particular the fluctuation of abilities within and between days that many individuals with TBI exhibit.” (Note that this fluctuation is one of many things that make some people who suffered even mild traumatic brain injuries unreliable, inconsistent employees.) The article goes on to note, “The prevalence of fatigue does not appear to change over time; in a study of individuals with TBI living in the community, 68% reported fatigue at 2 years post-injury and, when surveyed again at 5 years post-injury, a slightly higher percentage of these individual, 73%, reported problems with fatigue.”

This data support some claims that instead of getting better, some persons who experience even so-called “mild” traumatic brain injuries actually continue to get worse as the Metabolic Cascade of brain injury continues.

5. Symptoms from brain injuries will not always be identified in an emergency room setting or in the initial doctors’ appointments. As noted in the attached “*Traumatic Brain Injury and Concussion*”, a pamphlet published by the Centers for Disease Control and Prevention, page 1, Symptoms “...may appear right away. Others may not be noticed for days or months after the

injury, or until the person resumes their everyday life. Sometimes people do not recognize or admit that they are having problems. Others may not understand their problems and how the symptoms they are experiencing impact their daily lives.”

The important fact to remember and argue from this information is that symptoms of a brain injury are often not apparent soon after the event. This is another reason emergency room personnel often, one might state “more often than not”, fail to identify and diagnose concussions. Another reason is that persons who suffer brain injuries, when describing the event will not remember or even be aware they lost consciousness or suffered from amnesia. They may say something like, “The next thing I knew the fireman was asking me if I was okay,” or “I don’t know who got there first to help me.” This is something many emergency room doctors simply do not have the time to investigate, but YOU do.

These facts can help you confront a doctor who argues there was no brain injury because it was not mentioned in the emergency room records.

As an aside, I have noticed over the years of interviewing persons who sustained a brain injury that they almost always do not wish to admit they have suffered a brain injury and almost always do not want to admit that they have symptoms that are related to that brain injury. This is another reason they are not diagnosed. A doctor may ask, “How are you feeling?” The answer often is, “Fine”. How is the doctor going to diagnose a brain injury when the person says, “I’m fine.”?

I give suggestions on how to interview a client who has suffered a fall or any accident that results in a head shaking in a different article. Briefly here I will present a good example of how some brain injured people tend to hide or deny brain related symptoms by summarizing a 45 minute conversation I recently had with a 58 year old woman who was knocked down by a car while she was walking in a crosswalk. She suffered a concussion. She has not been my client. I simply had been helping her over the past year. She called me to ask if the \$8,000 being offered by the insurance company would be a good deal.

I asked her how she was feeling. “Fine”. On the surface, if I did not know anything about brain injuries, that would have been the end of the conversation. I would have said, “Well, if you are feeling fine, then \$8,000 would be a good deal.”

Instead I asked her, “How’s your hearing?” “Funny you should ask that.” “Why?” “I need hearing aids. The doctor says I’ve had a loss of hearing in my lower ranges. The doctor also said that was a bit unusual because usually as people age they lose hearing in their higher ranges, not the lower ranges.” This is the first indication something is going on here.

Over the course of the next 45 minutes I learned that although she denied suffering from mentation loss, her husband said that he had noticed she was having trouble understanding conversations. She repeatedly asked him to repeat things or slow down. Oh yes, and she could not drive at night since the accident because she was having vision issues.

When I asked her whether she had seen an ophthalmologist she said, “I almost forgot, she said I needed prism glasses.” I asked what that was all about and she said, “The prism glasses will help bring the two images I’ve been seeing come together.” (Double vision is another typical symptoms of brain injury.)

This woman absolutely did not want to admit that she had sustained a brain injury which had a devastating impact on her life. She pushed it off as a “normal” process of aging. None of the doctors she saw told her or even asked her whether she had suffered a brain injury. Her symptoms remained undiagnosed other than, “That’s unusual in a person your age”, until she spoke to me. Needless to say I recommended she not accept the \$8,000.00. Brain injured people tend to minimize or explain away their symptoms. They do not want to acknowledge difficulty with their brain. You have to know what questions to ask.

The brain is the “referee”, the “judge”, the discerning part of how we interact with physical reality. The brain is damaged. Therefore it is not surprising that it may have difficulty identifying a problem has occurred.

6. Not all brain injuries present the same way. In the article, “*Dissociation of Cerebral Glucose Metabolism and Level of Consciousness During the Period of Metabolic Depression Following Human Traumatic Brain Injury*”, the authors state, at page 395, that “...the level of consciousness, as judged by the GCS (Glasgow Coma Scale), does not appear to correlate with either global or regional CMRglc (Cerebral Metabolic Rate of glucose, which indicates the brain’s use of glucose) within the first month following TBI.

Going into more detail, at page 396, “...experimental studies have demonstrated that the rate of recovery of behavioral function parallels that of the recovery from metabolic depression. (Pappius, 1981; Hovda, 1996)”. This becomes important when one considers the significance of the next paragraph at page 396.

“One of the remarkable findings of this study was that a head-injured patient with a GCS score of 15 could walk up to the PET gantry and be found to have a global cortical CMRglc similar to that of a severely head-injured, comatose patient who was brought to the PET scanner mechanically ventilated on a gurney.”

The study also suggests that “GCS is a rather poor variable to judge level of consciousness from a statistical basis.” (Page 398.) It concludes that, “The first month following moderate and severe TBI is characterized by a dynamic state of cerebral metabolism, including both hyperglycolysis and reduced glucose utilization. It is remarkable that a similar degree and extent of CMRglc reduction is seen following a wide range of injury severity and types of injury, a finding that strongly suggests that CMRglc reduction is a fundamental component of the pathobiology of brain injury in general. Although the reduction of CMRglc likely has one or more etiologies, **the level of consciousness appears to have little influence among brain injured patients.** Further studies will be required to further characterize and understand post-traumatic CMRglc reduction so that we can improve the management of, and recovery from, traumatic brain injury.” (Emphasis added.)

Two important facts in this study you can use when representing persons with so called “mild” traumatic brain injuries:

- A. A patient may appear fully conscious and aware with a GCS of 15 and yet still have had a demonstrable reduction in CMRglc uptake if they had been given a PET scan which would have demonstrated, or at least implied the patient had sustained a very significant brain injury.
- B. Fully conscious and aware people presenting themselves at an emergency room, or being taken to the emergency room by others, with significant injuries to bodily systems other than the head, such as broken bones, internal injuries, etc., will almost not be diagnosed as having sustained a brain injury by the emergency room staff.

Therefore this article can be used to confront any doctor using the lack of emergency room documentation of a brain injury or a GCS of 15 as an argument for “no brain injury”. As has been illustrated above, a so called “mild” brain injury will result in negative CT and MRI scans yet still may have catastrophic results for your clients. A GCS score of 15 means the individual was conscious and responsive, but does not, by itself, rule out the presence of a significant brain injury or inform of the brain’s ability to metabolize glucose.

- 7. Another reason for the lack of a brain injury diagnosis in the emergency room or doctor’s examination soon after an injury is the reality that in many so called “mild” brain injuries, time is required for damage to occur and time is required for the symptoms to be recognized.

The chemical changes within the brain initiated by the initial shake or impact are illustrated in videos for which I’ve given links below. The so-called neurometabolic cascade of concussion can require several weeks to cause enough damage to become noticeable. The articles, “*The Neurometabolic Cascade of Concussion*” in the 2001 July-September edition of the Journal of Athletic Training describes this cascade and the damage that can be done by the initial insult. It also demonstrates how that damage can, through the release of chemicals and their reactions with surrounding cells, cause ongoing damage for days or weeks after the initial insult.

The follow up article, “*The New Neurometabolic Cascade of Concussion*” updates the scientific knowledge of how a brain in general and the damaged brain cells in particular react to a shaking or impact biomechanical force being applied to the head and brain.

8. There can be direct specific damage to the brain as in a coup contra coup injury causing impact damage from the brain hitting the skull and this can be axonal damage from the sudden changes of direction which can cause a crimping or shearing of the axonal structures within the brain. For an excellent presentation of what happens with a brain injury, please view:

<https://highimpact.com/exhibits/microanatomy-of-a-brain-cell>

<https://highimpact.com/exhibits/cellular-injury>

<https://highimpact.com/exhibits/how-trauma-effects-the-brain>

<https://highimpact.com/exhibits/effects-of-repeat-trauma-to-the-brain>

<https://highimpact.com/exhibits/closed-head-injury1>

<https://www.bing.com/videos/search?q=film+coup+contra+coup+brain+injury&&view=detail&mid=E21B10AECB0C79A657BBE21B10AECB0C79A657BB&&FORM=VDRVRV>

These articles are necessary to read and understand if you happen to run across a doctor who argues that a brain injury occurs at once and then the brain heals from that initial impact. As these articles demonstrate, the brain continues to react to the initial insult much as a bell continues to vibrate after being struck. Sometimes, unlike the vibrations of a struck bell which become softer and softer, the brain’s reaction to the initial impact can cause more damage than the initial impact itself.