



Injury Law Center®

Note: This information is provided to give you a basic understanding of the injury. It is not intended as medical advice. You should consult a qualified medical provider.

HEAD INJURY

Description

An injury to the head may damage the scalp, skull and the brain. A trauma to the head is capable of damaging the brain even if there is no evidence of bruising or lacerations to the scalp.

Head injuries can be caused by car crashes, sports injuries, falls, workplace injuries and assaults.

Types of Head Injury

Closed Head Injury

A closed head injury refers to a brain injury where there is no penetration through the skull into the brain. It may be the result of a blow to the head; of a moving head being stopped rapidly, such as when a person's head hits the windshield of a car in a crash; or by a sudden deceleration of the head without it striking an object, such as "shaken baby syndrome", or a whiplash type of injury often experienced in a car crash.



If the head is not moving on impact, the maximum damage will be found at the impact site.

However if the head is moving at the time of the injury, this will cause a "contre- coup injury" where the brain damage occurs not only at the point of impact but on the side opposite the point of impact, as a result of the brain slamming into the skull.

The most common type of closed head injury is known as a concussion. After a concussion, some people lose consciousness or are "knocked out" for a short period of time, but not always. You can have a brain injury without losing consciousness. Some people are simply dazed or confused following a concussion.

Some symptoms may occur right away, while others may not show up for days or weeks after the concussion. Sometimes the injury makes it hard for people to recognize or admit that they are having problems.

Practical Advice

Based upon over three decades of experience in representing injured people, it is very important that if you have any of the symptoms listed below following a concussion, no matter how subtle they may be, you must advise your physician, preferably a neurologist, of the symptoms. It is often helpful to have family members and friends be honest with you concerning your behaviors following a concussion. Signs of a concussion can be very subtle. Early on, problems may be missed by patients, family members, and even the doctors. The problem with a head injury is that most people look fine even though they are acting or feeling differently.

Medical Help

People with a concussion need to be seen by a doctor. Most are treated in the emergency department or at a doctor's office. Sometimes the doctors may do a CT scan or an MRI of the brain. Even if the brain injury doesn't show up on a CT scan or MRI, you still may have a concussion. CT scans and MRIs are very good at showing intracranial bleeding, that is bleeding within the brain.

Be sure to follow your doctor's orders, and in rare cases along with a concussion, a dangerous blood clot may form in the brain. You should contact your doctor right away if you have any of these dangerous symptoms:

- Headaches get worse
- Weakness, numbness or decreased coordination
- Repeated vomiting

The people checking you should take you to the emergency room right away if you:

- Cannot be awakened
- Have one pupil-the black part in the middle of the eye-larger than the other
- Have convulsions or seizures
- Have slurred speech
- Are getting more and more confused, restless, or agitated

Children should be taken to the emergency department after a blow or jolt to the head when:

- They have any of the danger signs for adults listed above
- They won't stop crying
- They can't be consoled
- They won't nurse or eat

Symptoms of Brain Injury

Following a blow or jolt to the head, if you feel that something is not quite right, or if you're feeling foggy, you should talk with your doctor.

Some symptoms of a concussion are:

- Low-grade headaches that won't go away
- Having more trouble than usual:
 - Remembering things
 - Paying attention while concentrating
 - Organizing daily task
 - Making decisions and solving problems
- Slowness in the thinking, acting, speaking, or reading
- Getting lost or easily confused
- Feeling tired all the time, lack of energy
- Change in sleeping pattern:
 - Sleeping for much longer periods of time than before
 - Trouble sleeping or insomnia
- Loss of balance, feeling lightheaded or dizzy
- Increased sensitivity to sounds lights and distractions
- Blurred vision or eyes that tire easily
- Loss of sense of taste or smell
- Ringing in the ears
- Change in sexual drive
- Mood changes:
 - Feeling sad, anxious or listless
 - Becoming easily irritated or angry for little or no reason
 - Lack of motivation

"Second impact syndrome"

Second impact syndrome occurs when a person with a concussion, even a mild one, suffers a second blow to the head before fully recovering from the first.

Neuropsychological Deficits

Often times a concussion or a traumatic brain injury will result in the axons of the brain being damaged, stretched and/or torn. Axons are microscopic fibers within the brain that transmit electrical and chemical impulses that provide us with our ability to speak, remember, learn, and are responsible for our cognition.

Neuropsychological assessment is an assessment by a clinical psychologist which consists of a battery of various test that can demonstrate a number of cognitive and behavioral deficits that may interfere with a person's ability to function. These typically include:

Attention and Concentration

Difficulties with attention and concentration are amongst the most common cognitive deficits following a minor head injury.

These difficulties experienced with attention can be obvious or subtle. Often the problems are difficult to detect in a structured, one-to-one situation with an examiner or therapist. However, the problems become more apparent when the individual is required to attend to information in a more natural environment.

Comments by the individual may become tangential. The individual often is unaware of the tangentiality of his comments. He may appear egocentric, self-centered, or selfish to others. Consequently, the symptoms associated with attentional deficits result in complications involving social relationships with family members, co-workers, and friends. Friendships may dissolve because of the brain-injured person's difficulty in maintaining reciprocity in communication.

Initiation and Planning

Disorders involving initiation and planning often manifest themselves in the lack of initiative demonstrated by individuals following minor head injury. Often this is misinterpreted as a psychiatric problem (i.e., depression) when, in fact, it represents a cognitive manifestation of the injury.

Impaired Judgment and Perception

Realistic self-appraisal may be compromised in patients following a head injury. In the minor-head-injury population, this deficit often takes the form of an exaggerated awareness and hypersensitivity to one's loss of prior function and integrity.

Patients may become depressed as a result of this loss of function. In addition to the manifestations of the subtle physical injury, this heightened awareness of their own deficits results in a considerable degree of psychological distress. Family members and friends also tend to deny the person's disability and expect that the injured person should be able to function as they did prior to the injury. This in turn serves to increase the individual's heightened sensitivity

and preoccupation with his/her own dysfunction since the reaction from others serves to invalidate the individual's own self-perception. Patients tend to become increasingly isolated and socially withdrawn in order to avoid confrontation or expectations of others which cannot be met.

Speed of Information Processing

Disorders in speed of information processing are common among head-injured patients. This refers to the head-injured person's difficulty in quickly registering incoming information, in the rapid cognitive processing of the material, and/or in rapid output. Problems with speed or processing represent a common long-term symptom following minor head trauma. Yarnell and Rossie studied a group of 27 patients who suffered from minor whiplash injury following a motor vehicle accident. None were more than initially "dazed" from the accident, yet all individuals tested neuropsychologically were found to demonstrate cognitive dysfunction involving vigilance, selective attention, memory, mental stamina, and cognitive flexibility.

It has been found that speed of information processing has a profound impact on general adaptation and social adjustment. Patients who are slow to process information typically withdraw from social interaction in order to avoid catastrophic reaction. They prefer to remain in a simple and predictable environment, as opposed to one that is complex and unpredictable. It is common for these patients to avoid social gatherings, even family functions, and to avoid going to unfamiliar settings.

Emotional Sequelae

There are a number of symptoms which characterize the emotional changes typically observed following mild traumatic brain injury. These include:

Reduced Frustration Tolerance

Perhaps the most common complaint involving personality change in patients following minor head trauma is increased irritability. These individuals blow up over the slightest provocation and have little patience for the frustration encountered in the daily environment. Family members often describe them as moody, argumentative, and always "on edge." They have difficulty adjusting to change and do not cope well in new, unfamiliar, or unexpected situations. This, coupled with their cognitive difficulties, exacerbates their deficits and adds to their disability. In new situations, these patients become easily overwhelmed. Other emotional reactions may become manifest, including increased anxiety or depression.

Increased Regression and Dependency

Patients typically become doubtful of their performance and indecisive in situations that require any risk to their personal integrity or responsibility. They become increasingly fearful of any further loss and prefer to avoid any situation which they have experienced failure but in which they consistently were successful pre-injury.

Depression

Depression is often associated with failure of early diagnosis. The patient is confused by what is happening but has recognized that the "old" or pre-injury self is absent or diminished.

Increase in depressive symptomatology can also result in increased isolation and withdrawal. Patients make consistent efforts to avoid exposure and further failure. They will choose to remain at home rather than attend social gatherings or even receive guests in their familiar home environment.

Post-concussion syndrome

Many people with a concussion will be diagnosed with post-concussion syndrome. Post-concussion syndrome will result in an ongoing interplay of behavioral, cognitive and emotional difficulties that often time include headaches, dizziness, mental confusion, behavior changes, cognitive deficits and depression.

Practical Advice

The symptoms of a concussion are often subtle and you need to advocate for yourself and/or have a family member advocate for you, with all of your medical doctors so that you are simply not "treated and stretted". You need to get medical care and diagnostic studies necessary to treat your closed head injury.

Penetrating Head Injury

If the skull is fractured, bone fragments may be driven into the brain and any object that penetrates the skull may not only damage the brain but implant foreign material into the brain which may lead to infection.

Skull fracture

A skull fracture may often times be obvious if blood or bone fragments are visible. A skull fracture should be suspected if there is:

- Blood or clear fluid leaking from the nose or ears
- Unequal pupil size
- Bruises or discoloration around the eyes (raccoon eyes) or behind the ears
- Swelling or depression of part of the head

Intracranial hemorrhage

A hemorrhage is bleeding inside the skull. A blood clot (hematoma) may occur if the blood vessel between the skull and brain ruptures. If this blood flow is not stopped it can lead to unconsciousness and death.

Diagnosis

The extent of damage in a severe head injury can often be assessed with computed tomography - CT scan, or magnetic resonance imaging-MRI, electroencephalograms-EEG and neurological and neuropsychological evaluations.

Key Terms

Computed tomography- CT scan -a diagnostic technique in which the combined use of a computer and x-rays produce cross-sectional images of tissue. It provides more detailed information than an x-ray.

Electroencephalogram (EEG)-A tracing of the tiny electrical impulses produced by the brain's activities. By measuring these patterns of the brain, the EEG can help diagnose certain conditions of the brain, such as seizures.

Magnetic resonance imaging (MRI)- a diagnostic technique that provides high-quality cross-sectional images of organs within the body without x-rays or radiation. ***Practical Advice***-if at all possible try to have an MRI that has the highest resolution that is the highest Tesla. Most MRIs have 1.5 Tesla, however many are now 3.0 Tesla. Open MRI is often very low resolution, with many being .3 Tesla

Amnesia- A loss of memory that may be caused by a brain injury, such as concussion.

Neuropsychologist-a clinical psychologist who specializes in assessing psychological status caused by a brain disorder.

HELP

If you have suffered a head injury, or any other type of injury, you should seek appropriate medical help and if your injury was caused by another's negligence or fault, you should seek appropriate legal help bring a claim for compensation.

Feel free to call or e-mail The Injury Law Center® for answers to your questions and help with your legal claim.

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