Types of Brain Injury

The bones of the skull are hard to protect the brain. When your head is hit or moved with force, the brain is injured when it moves at a different speed than the skull. The brain or a part of the brain can be bruised, stretched or torn to cause bleeding.

A person may have one or several types of brain injury. Recovering from a brain injury can take a long time. Read on to learn about the different types of brain injury.

Concussion

A concussion is the most common type of traumatic brain injury. It results from a fall or hit to the head that causes the brain to twist and turn inside the skull.

A concussion may cause bruising, bleeding or swelling of the brain. A skull fracture may occur along with a concussion.

A concussion is normally not life-threatening, but it can be serious. If your signs get worse after 7 to 10 days, see your health care provider. Medicines may be used to treat dizziness or headache, but time and rest is needed most for brain healing.

Contusion

Contusion means bruise. When the head is hit, the brain moves back and forth inside the skull. When the brain is pushed up against the ridges and sides of the skull, bruising to the brain can occur.

Because a big force is needed to create a contusion, the person may also have other brain injuries.

It often takes a long time for the person to recover from this injury. The location of the contusion and the amount of damage impacts recovery time.

Hematoma

A hematoma is a form of brain injury that involves a blood collecting around the brain.

Hematoma may develop right after a brain injury or later. There are different types of hematoma, depending on where the blood collects.

- Epidural hematoma – the outer layer of the brain between the brain and skull
- Subdural hematoma – the middle layer of the brain
- Intracerebral hematoma – the inside part of the brain
Treatment of a hematoma may include surgery to remove it. Recovery depends on how serious it was and is there were other injuries with it.

Cerebral Hemorrhage
This means bleeding in the brain. There are different types of hemorrhages, depending on where the bleeding is.
- Over the outer surface of the brain, called subarachnoid hemorrhage
- Into the spaces of the brain or ventricles, called intraventricular hemorrhage
- Into the brain tissue, called intracerebral hemorrhage

Treatment depends on how serious it is and where the bleeding is. It may include surgery and medicines. Recovery depends on how severe the bleeding is and whether there are problems from the bleeding.

Lack of Oxygen - Anoxia
Injury to the blood flow of the brain may cause anoxia (an-ox-ee-a) or a lack of oxygen to the brain. Any injury to the blood flow of the brain that decreases oxygen can cause brain damage. This includes heart attack, stroke, drowning or injuries with blood loss.

Treatment of anoxia includes supporting breathing and blood pressure, medicine and treating the cause of anoxia, if possible.

There may be problems such as loss of memory, changes in behavior, problems with speech or seizures. With severe anoxia, a long-term coma or brain death may occur.

Diffuse axonal injury (DAI)
An injury where the brain slides back and forth inside the skull, causing the brain’s nerves to be stretched or torn. Damage to the brain may be widespread. When the nerves are torn, they die. It is a moderate to severe form of brain injury.

The recovery process can take a long time. The person with this injury may be in a coma for months.

Talk to your doctor or nurse if you have any questions or concerns.