

# 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.

## Nerve Damage

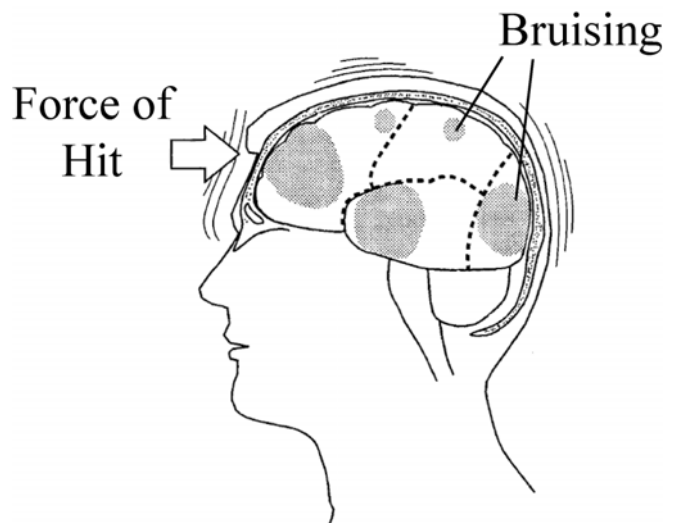
When the brain slides back and forth inside the skull, the brain's nerves are stretched or torn. Your doctor may describe the injury as mild, moderate or severe. Signs of nerve damage include loss of consciousness, called a coma, abnormal movement of the arms and legs, high blood pressure and fever.

## Lack of Oxygen

Lack of oxygen to all or part of the brain is called anoxia. 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. 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.

## Bruising

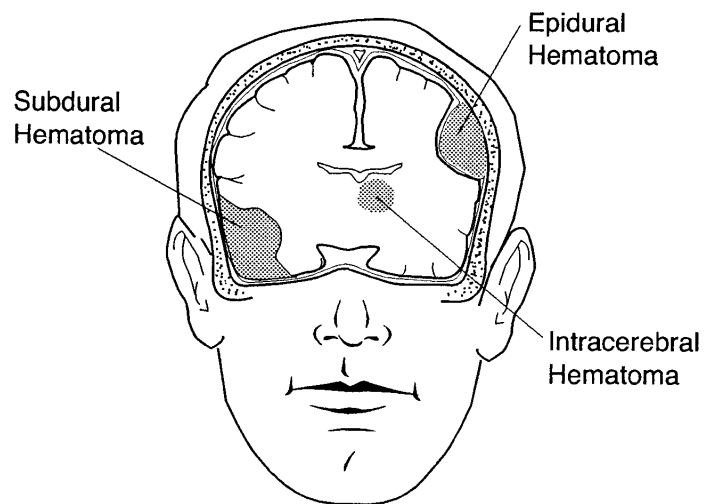
Bruising or contusion can occur when the head is hit and the brain moves back and forth inside the skull. Bleeding inside the brain or skull fractures may also occur. Bruising can cause brain swelling, coma, seizures, brain damage or higher pressure inside the skull.



## Hematoma

A hematoma is a pool or lump of blood. There are 3 types of hematomas based on where the blood pools.

- 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.

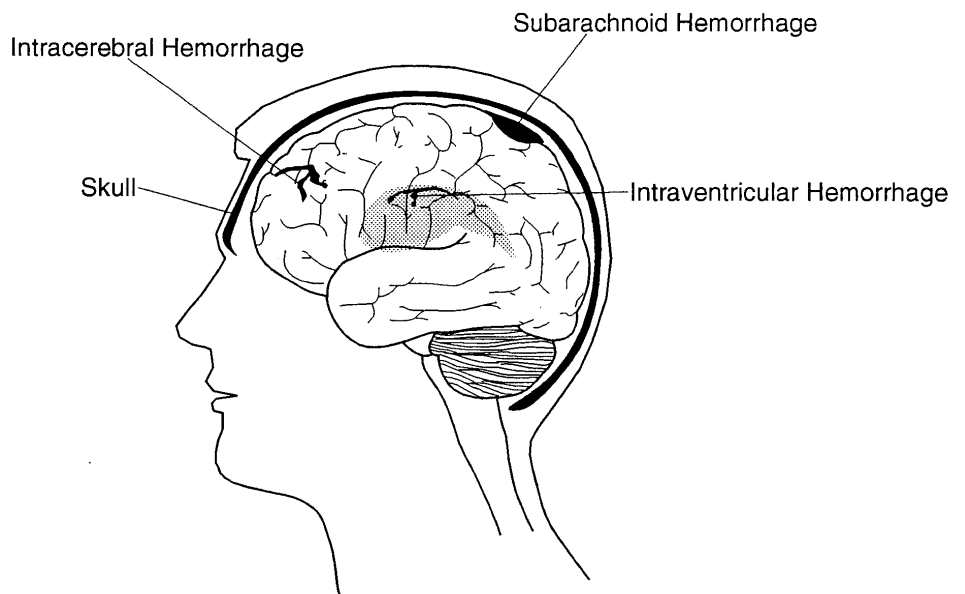


Hematomas can cause brain swelling, high pressure inside the skull, or coma. Surgery may be done to remove the hematoma. This depends on where the hematoma is and whether it is getting larger or causing problems. Hematoma may not cause any lasting effects, but other brain injuries may occur with the hematoma.

## Cerebral Hemorrhage

Cerebral hemorrhage is bleeding in the brain. Bleeding can occur in 3 areas of the brain:

- 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.



## **Your Care**

Treatment for a brain injury may include surgery and medicines. Rehab or therapy may be needed over time to help manage problems. Recovery will depend on how severe the brain injury was.

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