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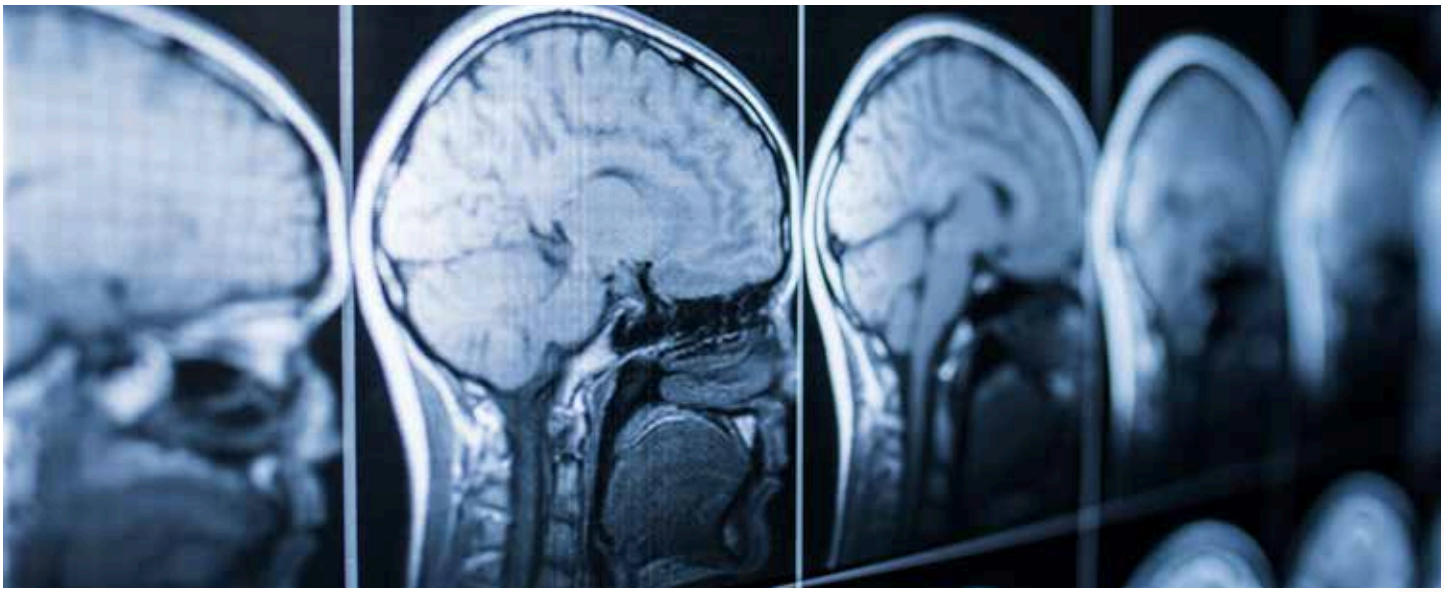

WHAT YOU NEED TO
About Traumatic Brain Injuries

A traumatic brain injury (TBI) is a sudden injury from an external force that affects the functioning of the brain. It can be caused by a bump or blow to the head (closed head injury) or by an object penetrating the skull (called a penetrating injury). Some TBIs result in mild, temporary problems, but a more severe TBI can lead to serious physical and psychological symptoms, coma, and even death.

TBI includes (but is not limited to) several types of injury to the brain:

» **Skull fracture** occurs when the skull cracks. Pieces of broken skull may cut into the brain and injure it, or an object such as a bullet may pierce the skull and enter the brain.

» **Contusion** is a bruise of the brain, in which swollen brain tissue mixes with blood released from broken blood vessels. A contusion can occur from the brain shaking back and forth against the skull, such as from a car collision or sports accident or in shaken baby syndrome.

» **Intracranial hematoma** (pronounced *in-truh-KREY-nee-uhl hee-ma-TOH-muh*) occurs when damage to a major blood vessel in the brain or between the brain and the skull causes bleeding.

» **Anoxia** (pronounced *an-OK-see-uh*), absence of oxygen to the brain, causes damage to the brain tissue.

The most common form of TBI is concussion. A concussion can happen when the head or body is moved back and forth quickly, such as during a motor vehicle accident or sports injury. Concussions are often called "mild TBI" because they are usually not life-threatening. However, they still can cause serious problems, and research suggests that repeated concussions can be particularly dangerous.

SIGNS & SYMPTOMS

A person who has a TBI may have some of the same symptoms as a person who has a non-traumatic brain injury. Unlike TBI, this type of injury is not caused by an external force, but is caused by an internal problem, such as a stroke or infection. Both types of injury can have serious, long-term effects on a person's cognition and functioning.

Anyone with signs of moderate or severe TBI should receive medical attention as soon as possible. Because little can be done to reverse the initial brain damage caused by trauma, medical personnel try to stabilize an individual with TBI and focus on preventing further injury. Primary concerns include insuring proper oxygen supply to the brain and the rest of the body, maintaining adequate blood flow, and controlling blood pressure. Imaging tests help in determining the diagnosis and prognosis of a TBI patient.

TREATMENT & PROGNOSIS

Patients with severe head injuries often need surgery to remove or repair hematomas (ruptured blood vessels) or contusions (bruised brain tissue). Disabilities resulting from a TBI depend upon the severity of the injury, the location of the injury, and the age and general health of the individual. Some common disabilities include problems with cognition (thinking, memory, and reasoning), sensory processing (sight, hearing, touch, taste, and smell), communication (expression and understanding), and behavior or mental health (depression, anxiety, personality changes, aggression, acting out, and social inappropriateness).

More serious head injuries may result in stupor, an unresponsive state, but one in which an individual can be aroused briefly by a strong stimulus, such as sharp pain; coma, a state in which an individual is totally unconscious, unresponsive, unaware, and unarousable; vegetative state, in which an individual is unconscious and unaware of his or her surroundings, but continues to have a sleep-wake cycle and periods of alertness; and a persistent vegetative state (PVS), in which an individual stays in a vegetative state for more than a month.