



## TRAUMATIC BRAIN INJURY

### ABOUT THE DISEASE

**Traumatic brain injury (TBI)** results from trauma to the head that leads to neurological dysfunction most commonly caused by vehicular accidents, drops, or falls.

**TBI** has a range of clinical manifestations that all depend upon the severity of brain injury and subsequent dysfunction. Patients may suffer minor balance issues, limb weakness, or may suffer from extreme dysfunction like seizures, loss of consciousness, and potentially death.

Please see the [Seizures](#) document for additional information.

### OBTAINING A DIAGNOSIS

A physical examination with a veterinarian, which includes neurological assessment, is the best tool at determining the extent of **TBI**.

Higher order imaging (MRI; CT) is the best tool at determining the extent of **TBI**.

Other tools will help assess each patient's severity such as blood pressure, electrocardiography (ECG), and potentially skull x-rays (radiographs).

As most patients are traumatized within other body systems, blood work and ultrasound may help determine if there are other internal injuries and/or blood loss.

### TREATMENT

Treatment is dictated by the severity of patient's symptoms, but all **TBI** patients should be hospitalized in early trauma to monitor for acute (sudden) degeneration in neurologic state.

Unless brain hemorrhage is suspected, medications (mannitol or hypertonic saline) are often administered to help reduce brain swelling as well as fluid support to increase blood flow to the brain.

Oxygen supplementation is often provided as a supportive measure, especially in patients who may not be breathing well from brain injury or from physical lung injury.

The presence of seizures often yields a poorer prognosis, but patients may also be given anti-epileptics to control seizure activity as it may arise.

### TIPS FOR SUCCESS

- Patients who show improvement in the first 24 hours will often recover, although full recovery may be very slow.