

Critical thinking - basic concepts of quantitative reasoning; hypothesis formulat...

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Traumatic Brain Injury Traumatic brain injury is an attained brain injury resulting when an external force causes damage to the brain. Such injury can occur upon a sudden and violent impact of the head on an object, or when something penetrates the skull and pierces the brain tissue. Medical professionals rate traumatic brain injuries as mild, modest or severe, ranging on the degree of damage to the brain. The current model for determining the severity of traumatic brain injury incorporates three criteria of GCS (Glasgow Coma Scale) which analyses eye-opening reactions to stimuli, duration of the PTA (Post Traumatic Amnesia) and LOC (Loss of Consciousness) (Silver et al, 2011). An individual suffering from mild traumatic brain injury may lose perception for a few seconds or minutes or may remain conscious throughout. Other mild traumatic brain injury symptoms include confusion, headache, lightheadedness, blurred vision, dizziness, ringing in the ears, fatigue, bad taste in the mouth, sleep pattern changes, mood or behavioral changes, nausea, slurred speech, temporary loss of memory, attention, concentration or thinking capacity (Cifu et al, 2010; Murdoch & Theodoros, 2001).

On average, more or less 2 million traumatic brain injuries transpire per year, either as isolated cases or by the side of other injuries. Common symptoms of moderate and severe traumatic brain injuries are abnormal social behavior, deficits in social judgment, frequent loss of attention, processing speed and executive functioning. Anyone with signs of traumatic brain injury ought to receive immediate medical attention; based on the fact that traumatic brain injury is a health risk. As a starter, medical personnel try to stabilize a person with traumatic brain injury and focus on preventing

additional injury since little can be done to correct the initial brain injury resulting from the trauma; this is regarded as an initial treatment for traumatic brain injury. The primary concerns include ensuring proper oxygen supply, ensuring adequate blood flow, and maintaining normal blood pressure. Imaging tests help in diagnosing a traumatic brain injury patient (High, 2005). Patients with mild to modest traumatic brain injury undergo skull and neck X-rays to check for bone fractures or spinal irregularities. Moderately to severely injured patients have to undergo rehabilitation depending on individual symptoms. Such therapy programs include speech/language therapy, occupational therapy, physiatry, psychology/psychiatry, and social support (Murdoch & Theodoros, 2001). Currently, research is underway to find means of mitigating secondary injury including a deep look into neuro-protection and hypothermia. Other current developments include the introduction of a machine that monitors oxygenation, which is attached to a probe placed in the brain to monitor intracranial pressure (Ogden, 2010).

The health-related research Question that I would like to answer in regard to the topic is: Does administering insulin to a traumatic brain injury patient enhance the brain's healing process by mitigating the levels of blood sugar to normal?

The specific hypothesis investigating the research question is: Administering insulin to a traumatic brain injury patient leads to slower brain healing process. This is presumably because the brain requires a lot of energy to heal.

References

<https://assignbuster.com/critical-thinking-basic-concepts-of-quantitative-reasoning-hypothesis-formulation/>

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