## **Concussion- Traumatic Brain Injury Hormone Dysfunction Syndrome**

## Secretropin®

A Growth Hormone Secretagogue



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## Secretropin<sub>®</sub>

Concussion- Traumatic Brain Injury

Hormone Dysfunction Syndrome

- > Football related head injuries (CFL, NFL).
- > Mixed Martial Arts (MMA).
- > Hockey, Boxing, Soccer, Lacross, Basketball
- > Motor Vehicle Accident (MVA).
- > Work related head injuries (WSIB).
- > Post-Concussion Syndrome.
- > Post-Traumatic Stress Disorder (PTSD).
- > Blast Trauma (IED).
- > Repetitive Surgeries.
- > Post-Stroke Syndrome.

Traumatic Brain Injury (TBI) is now recognized as a causative factor for hormonal deficiencies associated with personality changes. Psychological, Physiological, and Physical manifestations like; depression, anxiety, mood swings, bouts of anger, memory loss, inability to concentrate, learning disabilities, sleep deprivation, increased risk for heart attacks, strokes, high blood pressure, diabetes, loss of libido, menstrual irregularities, pre-mature menopause, obesity, loss of lean body mass, muscular weakness, and a number of other medical conditions can arise subsequent to head trauma.

Conventional medications (antidepressants, anti-anxiety, anti-seizure, anti-psychotic, and narcotics) do nothing to address the underlying causes that create the symptoms associated with TBI (Post-Concussion Syndrome) because they do not replenish the missing hormones. Many individuals under conventional treatment become further dysfunctional from the over-load of medications used for treating the superficial complaints. Take some time and review the medical articles that are being published addressing and acknowledging the association between TBI and Hormonal Dysfunction. Go to <u>www.secretropin.ca</u> for more information.

An estimated 1.9 million Americans sustain a TBI each year. Approximately half of these cases result in at least short-term disability, and approximately 52,000 of those people die from their injuries. Of those that survive, many will develop progressive hormonal deficiencies, which lead to post concussion syndrome or post TBI hormonal deficiency syndrome, a cascade of deficiencies of hormones that will affect every aspect of functioning and will have a dramatic effect upon the patient's quality of life.

Merriam *et al* found that just 20% of adults with growth hormone (GH) deficiency have a history of childhood-onset GH deficiency. Therefore, the remaining 80% are acquired in adult life, usually through acquired damage to the pituitaryhypothalamic region caused by TBI. Post TBI hormonal deficiency syndrome is typically associated with severe head traumas with a Glasgow Coma Score of less than 7 or 8 with loss of consciousness and coma. Survivors of such head trauma often suffer from impairment of cognition, language, and mood, as well as physical functioning.

However, more recent research suggests that relatively mild trauma can be enough to cause a TBI and post TBI hormonal deficiency. Motor vehicle accidents and sports, such as boxing, martial arts, wresting, football, are common causes of TBI. As are slips and falls, blunt trauma, and shaken trauma. Even seemingly innocuous rides at amusement parks can be violent enough to cause jarring of the stock of the pituitary that can predispose us to TBI.