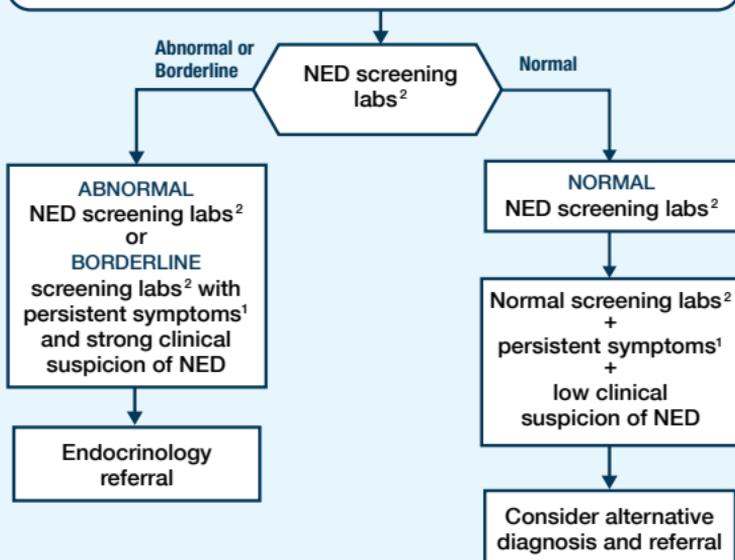


Neuroendocrine Dysfunction Screening Post Mild TBI



Neuroendocrine testing should be considered if there is a history of mild TBI (in accordance with the VA/DoD 2009 Management of Concussion/Mild Traumatic Brain Injury) and the patient is experiencing continuing symptoms that are suggestive of neuroendocrine dysfunction NED¹ for greater than three months duration; or there is a new onset of symptoms suggestive of NED¹ up to 36 months following mild TBI.



¹Symptoms that are suggestive of NED:

- Depression
- Emotional lability
- Anxiety
- Fatigue
- Poor memory
- Lack of concentration
- Loss of libido
- Infertility
- Amenorrhea
- Loss of muscle mass
- Increased body fat around waist
- Weight gain/weight loss
- Low blood pressure
- Reduced heart rate
- Hair loss
- Anemia
- Constipation
- Cold intolerance
- Dry skin

²Recommended NED screening labs:

(local and lab specific reference ranges should be utilized to determine deficiencies)

- 0800 cortisol levels
(<12 mcg/dl recommend follow up)
- LH (luteinizing hormone)
- FSH (follicle stimulating hormone)
- PRL (prolactin)
- IGF-1 (insulin-like growth factor)
- TSH (thyroid stimulating hormone)
- FT4 (free thyroxine)
- 0800 testosterone for males or estradiol for females

Neuroendocrine Dysfunction Screening Post Mild TBI

This fact sheet summarizes the clinical recommendation that was developed from the proceedings of the 2010 DCoE sponsored Neuroendocrine Sequelae and TBI Literature Review and Consensus Meeting. The complete clinical recommendation document and list of references can be accessed online at dcoe.health.mil/Resources in the TBI product listing.

- Of the approximate 15 percent of individuals who experience a mild TBI and remain symptomatic, an estimated 15-30 percent develop NED
- While NED is more often associated with severe TBI, it is important to recognize that NED occurs with mild and moderate TBI as well
- The onset of NED symptoms may occur up to 36 months after injury
- Although multiple endocrine deficiencies have been reported, the most frequently identified in mild TBI are addressed in the DCoE clinical recommendation
- NED symptoms may overlap other medical and psychiatric diagnoses such as post concussive syndrome (headaches, dizziness, fatigue, irritability, anxiety, insomnia, loss of concentration, memory, noise and light sensitivity), sleep disorders, depression or posttraumatic stress disorder (PTSD)
- Referral to an endocrinologist is warranted for:
 - abnormal NED screening lab results
 - borderline NED screening lab results in the individual with persistent symptoms in addition to a strong clinical suspicion
- If the patient continues to have normal NED screening labs and persistent symptoms, consider alternative diagnosis and referral
- Delay in diagnosis and treatment of NED may impair overall recovery and rehabilitation