

# Case Study

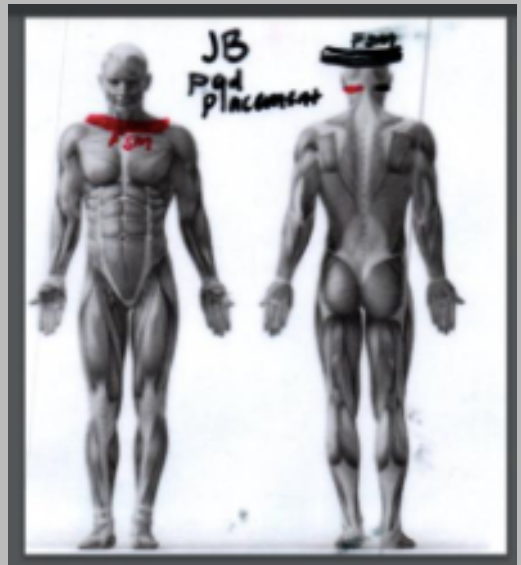
Neuromuscular electrical stimulation improves recovery time post-concussion

## PERFORMED AT:

*Performance PT and Wellness*

## DIAGNOSIS:

**17 year old male who suffered a concussion while playing high school football at practice. His biggest complaints at the time of the evaluation were of dizziness, lightheadedness, difficulty focusing/concentrating, reading/visual scanning and tracking, and of daily headaches that increased with the above activities including school work.**



## TREATMENT AND OUTCOME:

Started with FSM completed with towels on back of head and anterior chest with sports concussion protocol for 4 days, at least 30 minutes each treatment. Patient was off of school for 4 days following concussion. Prior to patient's first day back to school, we completed balance activities with Neubie on mastoid processes (negative on R, positive on L and switched polarity halfway through) while completing: SLS, rhomberg, narrow BOS, wide BOS (EO/EC for all), walking with head turns in all directions, narrowBOS walking, tilt-board tasks, VOR activities in standing on and off foam, walking on treadmill to increase HR. After pt continued to progress, we trialed return to sport tasks including running on treadmill, cutting, weaving, pivoting, running pass plays with a football, sports cord fwd/backward running and lateral shuffling. Pt had no symptoms during session or following session. After treatment was completed, pt was able to return to a full day of school and 2 days of non-contact football practices with no symptoms. He denied any headaches or dizziness and was able to make up his school work that he missed within 2 days.

## **CLINICAL FINDINGS:**

Upon initial evaluation, patient had nystagmus with saccades and smooth pursuit, very poor balance in SLS with inability to maintain on L side with eyes open or eyes closed, and difficulty tolerating session due to headaches, lightheadedness and dizziness. Patient was able to SLS on R side for 3 seconds with eyes opened.

## **DISCUSSION:**

Patient was able to progress with concussion protocol using the Neubie and FSM and return to sport and school with no symptoms within 12 days of injury and avoiding a prolonged recovery.

## **PATIENT PERSPECTIVE:**

The patient reports that he is very happy to be able to return to both school and to playoff football without symptoms as he was initially very stressed and anxious, concerned that he would not be able to return to football this year. He feels that the Neubie and FSM along with exercises and instructions for home allowed him to recover much faster than without.