



fatigue under stress

Oshin Tyagi, Harlyn Nguyen, Ranjana Mehta

Texas A&M University





Introduction

Methods

Voluntary exercise performance PFC Regulates exercise refrontal cortex Afferent feedback Descending drive (exercise induced loss = Central fatigue)

Descending driv

Exercise under stress



Transcranial Magnetic Stimulation 100% MVC 80% MVC 60% MVC 30% MVC

Transcranial Magnetic Stimulation **b** Brachial Plexus Stimulation

Brain Imaging using fNIRS



Load cell

Electromyography over Biceps and Triceps

Males

Fatigue

Objective: To identify the contribution of supraspinal factors of neuromuscular fatigue under stress for young men and women



Stress had a facilitative effect on central fatigue: engagement of the prefrontal cortex in stressful math task likely delayed fatigue regulation by the cortex







Expected findings from hemodynamic cortical activity \rightarrow





Voluntary activation was also lower for individuals indicating that central factors