Introduction

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

Methods

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 →

Results

Demographics

<table>
<thead>
<tr>
<th>Males (n = 13)</th>
<th>Females (n = 14)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>29 ± 3</td>
</tr>
<tr>
<td>Height (cm)</td>
<td>175 ± 2</td>
</tr>
<tr>
<td>Body Fat percentage</td>
<td>23% ± 2%</td>
</tr>
</tbody>
</table>

Fatigability

Fatigability was lower under stress for both males and females.

Anxiety

Voluntary activation

Voluntary activation was also lower for stress session for individuals indicating that central factors responsible.

Maximal voluntary exercise performance

Electromyographic response to stimulation

VA = Voluntary force + Superimposed Twitch

VA Loss = VA before fatiguing task – VA after fatiguing task

Electromyographic response to stimulation

Maximal voluntary force

Acute stress episode

Maximal voluntary force

Voluntary activation was also lower for stress session for individuals indicating that central factors responsible.