The Influence of Hydration on Mood

Summary of Findings

- **Scientific Definition:** For the purposes of this review we will define mood as the psychological and emotional states that involve tension/anxiety, depression/dejection, anger/hostility, vigor/activity, fatigue/inertia, and confusion/bewilderment. Total mood disturbance is defined as the estimate of overall affective state that is estimated from the above six subscales.
- Hydration status has been shown to adversely affect mood with increasing levels of dehydration and has been seen with levels of dehydration as low at 1.3-1.5%. ¹⁻⁵
- Both men and women have been shown to experience disturbances in mood during both rest and exercise while mildly dehydrated. Comparatively, women seem to be affected more by dehydration than men in regards to total mood disturbance. ¹,²
- Total mood disturbance increases with increasing levels of dehydration and has been shown to increase with increasing impairments in cognition. ⁷
- Dehydration can act as an additive factor to increased total mood disturbance when other factors (environmental stress, sleep loss, increased workload, and impaired nutritional status) are involved. ⁸,⁹
- Exposing soldiers to the stress of simulated combat has deleterious effects on mood, especially with increased percent of body mass loss that occurs during dehydration. ¹⁰
**Directions:** Describe HOW YOU FEEL RIGHT NOW by checking one space after each of the words listed below:

<table>
<thead>
<tr>
<th>FEELING</th>
<th>Not at all</th>
<th>A little</th>
<th>Mod.</th>
<th>Quite a bit</th>
<th>Extremely</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friendly</td>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Tense</td>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Angry</td>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Worn Out</td>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Unhappy</td>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Clear-headed</td>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Lively</td>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

The Profile of Mood States (shown left in abbreviated form) is one of the valid tools that are used to assess mood. It is comprised of 65 items that asks the participant to rate their feelings based on the words provided.

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**Practical Applications**

- Maintaining an appropriate level of hydration is essential in preventing an increase in total mood disturbance.
- Since mood and cognitive function are interrelated, maintaining a euhydrated state will ensure optimum levels of cognitive processing and associated mood.
- Since dehydration has been shown to affect mood during both rest and exercise, it is recommended that one maintain an appropriate level of hydration throughout the day.

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**Looking Ahead**

- While evidence shows that total mood disturbance is affected by dehydration, there have been no studies done to date looking at changes in mood with increasing levels of dehydration over time.
- Future research looking at soldiers in the military to identify the magnitude effect that hydration has on mood disturbance when soldiers experience multiple stressors at once (during a combat simulation for example).
- Additional research looking at military soldiers to see how real combat situations may affect mood, especially when they are in situations where appropriate hydration is impossible to maintain.

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**References**