EFFECTS OF FLUID RESTRICTION ON UPPER AND LOWER BODY STRENGTH AND HYDRATION STATUS IN AMATEUR RUGBY PLAYERS

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Background
- Maximum strength is negatively affected by hypohydration.
- Previous studies have used exercise heat stress or passive dehydration methods such as heat exposure to manipulate hydration status.
- Such methods induce elevations in muscle temperature that impair muscle contractile properties hence exacerbating the negative effects of dehydration on strength (Maughan, 2003).

Purpose
- To assess the effects of 6 hrs of fluid deprivation on maximum strength.

Methods
- 10 male collegiate rugby players (mean ± SD; age: 22 ± 2.7 years, body mass: 91.4 ± 8.5 kg, stature: 182.5 ± 12.5 cm)

Results

- Mild dehydration was experienced after 6 hrs of fluid restriction
- Negative effect on upper and lower body maximum strength.
- Findings agree with Judelson et al. (2007) who observed that ~3-4% hypohydration induced by either exercise heat stress or passive dehydration reduces muscular strength by ~2%.
- The reduction in body mass in his study is similar to that reported by Schoffstall et al. (2001) for passive dehydration.

Discussion
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- Negative effect on upper and lower body maximum strength.
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Conclusion
- A relatively short time period of six hours fluid restriction can cause mild dehydration and impair maximum strength.

References