Results
• 65 participants were used in the final analysis; data reported in Table 1.

Table 1: Participant demographics

<table>
<thead>
<tr>
<th></th>
<th>Males (n = 35)</th>
<th>Females (n = 30)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>24.4 ± 5.0</td>
<td>21.9 ± 3.9</td>
</tr>
<tr>
<td>Height (cm)</td>
<td>181.2 ± 10.1</td>
<td>168.6 ± 8.7</td>
</tr>
<tr>
<td>Weight (kg)</td>
<td>82.4 ± 10.5</td>
<td>63.9 ± 10.6</td>
</tr>
<tr>
<td>BMI (kg/m²)</td>
<td>25.1 ± 3.0</td>
<td>22.4 ± 3.0</td>
</tr>
</tbody>
</table>

• Compared to the criterion Wang-5C, 3DO-5C showed an accurate assessment of fat mass (slope = .85, $r^2 = .74$, RMSE = 2.8 kg).

• Precision for fat mass RMSE (%CV) was 3.0 kg (10 %) for 3DO-5C, .23 kg (5 %) for Wang-5C.

• Average 3DO-5C hydration of lean body mass was 70.6% ± 3.2%, similar to values reported in hydration studies [4]. Precision was .09 %.

Conclusion
• 3DO-5C offers an accurate and accessible way to measure fat mass independent of hydration status. Further research is warranted to improve the precision of this model for monitoring change accurately.

• The 3DO-5C model provides a feasible and accessible method for body composition assessment. In addition, multiple within-day measurements allow for better mean measures for monitoring intraday hydration changes in sports.

References

"Simplified multicompartment models provide a feasible body composition assessment and tracking tool in the field"