A study into the nutritional preparation of endurance athletes during training and competition weeks.

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Background
An endurance athlete will train specifically for their event, this will vary between athletes depending on several factors. These factors will include level of competition and the support they get for their training, knowledge of the type of training they require to maximise their abilities. The action taken will depend on where this knowledge is from, whether it is evidence based and how to transcribe this into action to benefit them. The same principles apply for nutritional preparation. Terms such as “Carbohydrate Loading” and “Training Low” have been investigated increasingly in recent years by researchers such as Burke, et al. (2011), Marquet, et al. (2016) and Chlíbková, et al. (2017). However despite explaining the benefits of these manipulations they conclude that athletes choose to disregard this information. It was therefore questioned as to whether the level of performance and source of this knowledge affects the application for individual athletes.

Methods
A cross sectional study using a multi performance level of endurance athletes, between the ages of 18 -40 years old.

Results
45 Qualtrics based Food frequency questionnaires were completed. All participants had an online food portion guide to aid their portion* calculations (*Portions were calculated for this study using images in Appendix 13).

Table 1. Details the participants credentials

<table>
<thead>
<tr>
<th>800m</th>
<th>1500m</th>
<th>3000m</th>
<th>5000m</th>
<th>10,000m</th>
<th>% Marathon</th>
<th>Marathon</th>
</tr>
</thead>
<tbody>
<tr>
<td>All participants</td>
<td>n=45</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>University/Club (n=17)</td>
<td>2.22% (n=1)</td>
<td>22.22% (n=10)</td>
<td>6.66% (n=3)</td>
<td>6.66% (n=3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>County (n=6)</td>
<td>2.22% (n=1)</td>
<td>4.44% (n=2)</td>
<td>6.66% (n=3)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>International (n=8)</td>
<td>4.44% (n=2)</td>
<td>4.44% (n=2)</td>
<td>22.22% (n=1)</td>
<td>22.22% (n=1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>National (n=11)</td>
<td>6.66% (n=3)</td>
<td>22.22% (n=1)</td>
<td>4.44% (n=2)</td>
<td>4.44% (n=2)</td>
<td>22.22% (n=1)</td>
<td></td>
</tr>
<tr>
<td>Other (n=3)</td>
<td>2.22% (n=1)</td>
<td>4.44% (n=2)</td>
<td></td>
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</tbody>
</table>

Discussion and Conclusion
It can clearly be seen that there was a greater increase of fluid in take in the competition week.
A significant increase of carbohydrate intake was observed across a variety of the events and performance levels. However it is unknown whether this was an intended manipulation of Carbohydrate Loading or Training Low. There was no significant area for the source of this knowledge, however the majority of the participants reported to have learnt through Research based literature.
In conclusion this study has demonstrated a narrow insight into an area which requires further research. Athletes have been seen to have the knowledge of the nutritional manipulations in question across both the performance levels and the event groups. However, the understanding and interpretation of this information is unknown and very few have shown that they carry out these methods successfully in this study and in previous research (Marquet, 2016). This is thought to be down to the athlete’s ambivalent behaviour, misunderstanding of the terms or how to apply them to their existing preparations.

References