Oat fibre and chilli promote satiety synergistically

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According to the World Health Organization (WHO), obesity has become a global health problem. Approximately 2 billion adults were overweight and over 650 million of these were classed obese in 20161). Ready access to energy-dense, highly palatable food contributes to an obesogenic environment2). The demand for food consumption is not just driven by a need for energy but also by the pleasure of eating the food itself3). In order to control obesity, foods that increase satiation and satiety may be bene


Hunger levels for all conditions decreased and fullness levels increased significantly after meal consumption. The addition of chilli to the 20 % fibre noodles had the most significant effect on hunger and fullness followed by 20 % fibre noodle without chilli. Chillii had no effect on hunger and fullness at 10 % fibre, but seem to reduce fullness at 0 % fibre. In conclusion, fibre and chilli appear to affect satiety synergistically at higher fibre levels. Future work will focus on determining the optimal level of fibre and capsaicin that can contribute to higher satiety effect and to investigate effects over longer post-meal periods.

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Table 1. Comparisons of the mean estimates for the difference after and before the meal between the control condition (no added fibre and no chilli) and different experimental conditions for hunger and fullness attributes

<table>
<thead>
<tr>
<th>Fibre</th>
<th>Chilli</th>
<th>Diff</th>
<th>Effect size (d)</th>
<th>p-value</th>
<th>95 % CI</th>
<th>Diff</th>
<th>Effect size (d)</th>
<th>p-value</th>
<th>95 % CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>Present</td>
<td>-0.17</td>
<td>-0.40</td>
<td>0.35</td>
<td>[-1.25, 0.46]</td>
<td>-0.42</td>
<td>-1.08</td>
<td>0.02</td>
<td>[-1.98, 0.17]</td>
</tr>
<tr>
<td>10 %</td>
<td>None</td>
<td>0.25</td>
<td>0.60</td>
<td>0.17</td>
<td>[-0.27, 1.66]</td>
<td>0.67</td>
<td>1.72</td>
<td>&lt;0.01</td>
<td>[0.73, 2.72]</td>
</tr>
<tr>
<td>10 %</td>
<td>Present</td>
<td>-0.08</td>
<td>-0.20</td>
<td>0.63</td>
<td>[-1.05, 0.65]</td>
<td>-0.08</td>
<td>-0.22</td>
<td>0.60</td>
<td>[-1.06, 0.63]</td>
</tr>
<tr>
<td>20 %</td>
<td>None</td>
<td>0.50</td>
<td>1.19</td>
<td>0.01</td>
<td>[0.27, 2.11]</td>
<td>0.33</td>
<td>0.86</td>
<td>0.06</td>
<td>[-0.02, 1.75]</td>
</tr>
<tr>
<td>20 %</td>
<td>Present</td>
<td>0.83</td>
<td>1.99</td>
<td>&lt;0.01</td>
<td>[0.95, 3.02]</td>
<td>0.67</td>
<td>1.72</td>
<td>&lt;0.01</td>
<td>[0.73, 2.72]</td>
</tr>
</tbody>
</table>