

## The effect of boarfish protein hydrolysate on postprandial glycaemic response and satiety in healthy adults

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There have been increased efforts to find an added-value application for the currently underutilised pelagic fish species, Boarfish (*Capros aper*)<sup>(1)</sup>. Recent *in vitro* and *in vivo* research has demonstrated that fish protein hydrolysate (BPH) has a beneficial effect on glycaemic control and reduced food intake<sup>(2)</sup>. This study aims to investigate the effect of consuming boarfish on postprandial glycaemic control in human participants.

A randomised controlled human intervention crossover study was undertaken in a cohort of healthy adults (n = 20) to investigate the effect of consuming a BPH (3.5 g) drink on postprandial glycaemic control in comparison to a control drink. Blood samples were collected before (0 mins) and after the test drink was consumed over a 3-hour period (15, 30, 60, 90, 120 and 180 mins). Collected blood samples were analysed for biomarkers of satiety (ghrelin, leptin) and glycaemic control (glucose, insulin, glucagon-like peptide 1 (GLP-1)). Visual analogue scales (VAS) were completed at each time point by participants to provide a subjective measure of their satiety.

Paired T test analysis revealed no significant difference between the area under the curve (AUC) for insulin or glucose, when the effect of BPH consumption was compared to the standard drink. A significant increase in satiety rating by 11.1% at 180 minutes ( $P = 0.034$ ) was reported following BPH consumption in comparison to the control drink (Fig. 1).

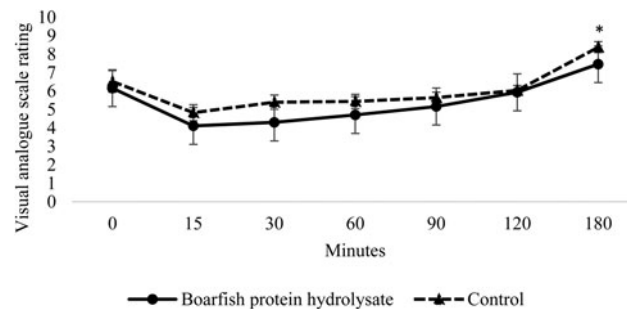


Fig. 1. Subjective hunger ratings over 3 hours by participants consuming boarfish protein hydrolysate and control.

This study showed that consuming 3.5 g of BPH had no effect on biomarkers of satiety or glycaemic control, albeit a higher dose may be required to see an effect. The BPH may have satiating effects which warrant further investigation.

1. Hayes M, Mora L, Hussey K, Aluko RE (2016) *Innov Food Sci Emerg Technol* 37, 253–60.
2. Harnedy PA, Parthasarathy V, McLaughlin CM *et al.* (2018) *J Func Foods* 40, 137–45.