

challenges separated by one week. Meals provided 30% of EER and consisted of toasted bread, jam and varying oils, resulting in an isoenergetic control, oleic acid (OA) and linoleic acid (LA) meals. The two high fat meals had equal lipid contents and matched levels of the specifically elevated fat. Blood samples were collected via an intravenous cannula at baseline (1 ¼ h pre-consumption), and 1 and 2 h post-consumption. Appetite parameters were assessed immediately before consumption and 2 h postprandially with visual analogue scale questionnaires. Serum adiponectin, ghrelin, leptin, adipsin, CRP, GIP, GLP-1, glucagon, insulin, PAI-1, resistin and visfatin were quantified using a Bioplex multiplex suspension array system.

Results: The LA meal resulted in a net increase in ghrelin AUC over the sampling period compared to the control meal, accompanied by no change to postprandial prospective food intake perception. The LA meal resulted in a net increase in adiponectin AUC and absolute increase over the sampling period compared to the control and high oleic acid meals. No other measurements were affected by meal type consumed.

Discussion: The increase in ghrelin and lack of change in post prandial prospective food intake in response to the high linoleic acid meal may show a dysregulation in satiety signalling and appetite control. The reason for the acute increase in adiponectin following the consumption of the linoleic acid meal is unclear and requires further investigation.

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Cognitive performance in normal weight and obese young women and its association with omega-3 PUFA



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Background and significance: Low body status of omega-3 polyunsaturated fatty acids (n3PUFA) has been linked with cognitive decline in older adults. Evidence also indicates that obesity and its comorbidities may be associated with cognitive decline, however it is as yet unknown as to how these factors affect cognition in younger adults. Since n3PUFA status and obesity are both modifiable risk factors for reduced cognitive function, we sought to understand their relationship with cognition at an age and stage when they may indeed be effectively treated/modified.

Methods: Non-smoking, healthy, young (18–35 y) normal weight (BMI 18.5–24.9 kg/m², NW) and obese weight (BMI > 30 kg/m², OB) women were recruited. Participants completed anthropometric and cognitive assessments (using a validated computerised cognition testing platform, IntegNeuro™), and provided a fasting blood sample. Performance on five cognitive domains (impulsivity, attention, information processing, memory, executive function) was reported as z-scores (normal range ±1 z-score). Omega-3 Index (O3I) was calculated as the erythrocyte membrane content of eicosapentaenoic acid plus docosahexaenoic acid as a percentage of total membrane fatty

acids. Analyses used ANOVA, Chi square and Pearson correlation.

Major findings: 288 (NW: $n=150$, OB $n=138$) women (mean \pm SD: 25.8 ± 5.1 y) completed all assessments. Although cognitive function was within the normal range, OB women had poorer performance on attention (NW: 0.31 ± 1.38 ; OB: -0.25 ± 1.38 , $p < 0.001$) and were more impulsive (NW: 0.36 ± 1.14 ; OB: -0.07 ± 1.07 , $p = 0.033$). Mean O3I for NW and OB were 6.8 ± 1.7 and 5.8 ± 1.6 respectively, $p < 0.001$. Differences in impulsivity, but not attention, between OB and NW women were attenuated when analyses were controlled for O3I.

Conclusions: OB women had lower scores for attention and impulsivity, with O3I explaining some of the differences in impulsivity. However, as cognitive performance was in the normal range for both groups, the clinical significance for daily cognitive function warrants further investigation.

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To nanny or nudge to prevent obesity? An analysis of the 'intrusiveness' of stakeholder recommendations to the Australian Government



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The ethical concern of a 'nanny state' averts governments from implementing cohesive policies for obesity prevention. This study explored the similarities and differences in policy options, proposed by different stakeholder groups, through constructs of intrusiveness and autonomy. We conducted a content analysis of submissions to the Australian Government's Inquiry into Obesity (2009), sub-grouped by setting, target behaviour and stakeholder, and categorised by intrusiveness to choice. Each recommendation was labelled as autonomy-positive, neutral or negative according to an existing ethical framework [1]. Submissions ($n=158$) were made by academia (23%), industry (18%), public health specialists (16%), NGOs (15%), consumers (13%), public providers (11%) and policymakers (5%). The findings suggest the degree of influence to autonomy, is significantly associated with the frequency of recommendation

(<0.001). Enhancing autonomy for dietary change was the most frequent recommendation in all groups. Options which reduced autonomy were least frequently recommended in every setting; but more likely in schools (28%, $n=26$). Cross-group comparison suggests a significant difference in the frequency of autonomy-negative, neutral, and positive recommendations made between the stakeholder groups ($p < 0.05$). Consumers recommend reducing individual autonomy to the greatest extent, whilst industry and policy makers suggest this least frequently. To improve dietary choice, industry was the only group not to recommend diminishing autonomy. To increase physical activity, consumers were the only group to recommend reducing autonomy more frequently than enhancing autonomy. This analysis supports the relevance of these constructs to obesity prevention policy options. The acceptable level of intrusiveness may vary according to setting, target behaviour and stakeholder. The findings emphasise the diversity of perspectives involved in obesity, and significance of industry in influencing policy decisions. Given the consensus across stakeholder groups favouring policies which enhance autonomy, considering the influence of policy on autonomy could provide a tool for governments to re-frame action for obesity prevention.

Reference

[1] Griffiths & West. <http://dx.doi.org/10.1016/j.puhe.2015.08.007>; 2015.

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