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Dietary glycaemic index and glycaemic load are unrelated to adiposity in pre-pubertal girls

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Background – Low glycaemic index (GI) and glycaemic load (GL) foods promote satiety, increased fat oxidation, delayed hunger, and minimise declines in metabolic rate, through reduced fluctuations in postprandial glycaemia and insulinemia. Thus, dietary GI and GL may have a role in development of obesity, however, few studies have investigated these relationships in paediatric populations.

Objective – To investigate relationships between dietary GI and GL and adiposity in children.

Design – Participants were 80 pre-pubertal girls from Brisbane, Australia, aged 5 – 11 yrs. Measures of adiposity were percentage body fat (%BF) derived using body volume from BodPod, and standard deviation scores for body mass index (BMI SD score) and waist circumference (WC SD score). Dietary intake, including GI and GL, was assessed via a parental assisted 4-day weighed food diary. Dietary variables were adjusted for total energy intake residuals. Physical activity was assessed via a parental assisted 4-day diary and pedometers. Correlations were calculated for dietary GI and dietary GL with measures of adiposity. Interactions with potential confounders were examined using stepwise regression.

Outcomes – Mean (+/-SD) were 0.69 (1.27) for BMI SD score; 1.70 (1.38) for WC SD score; and 25.2% (10.1%) for %BF. There were no significant correlations for dietary GI or GL with measures of adiposity.

Conclusion – Our findings in free-living pre-pubertal girls suggest dietary GI and dietary GL are unrelated to adiposity, either centrally located (WC SD score), or generally distributed (BMI SD score and %BF). This supports previous findings, however, we used BodPod, a more rigorous method of assessing %BF. One limitation may be low numbers of obese subjects. It is possible that any impact of dietary GI or GL on obesity in pre-puberty was not evident in our group of normal weight and moderately overweight girls. Further studies should include a greater proportion of obese children to clarify the possible associations between dietary intake and the magnitude and distribution of adiposity in young girls.

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An investigation of course content related to evidence-based recommendations for overweight and obesity in nutrition, dietetics and exercise leader training in Australia

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Background – Poor diet and insufficient physical activity contribute to adverse health outcomes, including the development of overweight and obesity. Professional associations for nutritionists, dietitians and exercise leaders promote their members as being able to offer efficacious evidence-based services to individuals seeking a healthier weight. The NH&MRC recommends behaviourally-based interventions be included in any weight-management program for overweight and obese populations.

Objective – This study investigated the pre-service training of nutritionists, dietitians and exercise leaders in Australia and its alignment with the positions of their professional associations and the NH&MRC guidelines on behaviourally-based approaches in weight-management.

Design – Using a desk-top audit and data mining methodology, 38 University courses for nutritionists, dietitians and exercise leaders and 1 national training package for exercise leaders were identified in June-July 2008. Course level and subject content descriptions were obtained from on-line sources for each training course, resulting in a 26,000 word electronically searchable database. Key reference and target words were determined for each profession and subsequently applied in iterative searches of the database.

Outcomes – Data revealed little evidence that the training of nutritionists, dietitians and exercise leaders in Australia reflected the positions of their professional associations or the recommendations of the NH&MRC in respect to physical activity promotion and behaviourally-based approaches to overweight and obesity remediation. Within the training courses, evidence indicates that nutritionists and dietitians receive more, but still limited, behaviourally-based intervention training than do exercise leaders.

Conclusions – Evidence indicates the majority of nutritionists, dietitians and exercise leaders in Australia are not receiving appropriate training as recommended by their professional and accreditation bodies nor the NH&MRC.