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## Comparison of food group intakes at eating occasion by diet quality: findings from a nationally representative study of Australian adults

N.R. Tran<sup>1</sup>, R.M. Leech<sup>1</sup>, K.M. Livingstone<sup>1</sup> and S.A. McNaughton<sup>1</sup>

<sup>1</sup>Institute for Physical Activity and Nutrition (IPAN) School of Exercise and Nutrition Sciences, Faculty of Health, Deakin University, Deakin University, Melbourne, Vic., Australia

Many Australian adults have inadequate intakes of the Australian Dietary Guidelines (ADG) recommended five food group foods and excessive intakes of discretionary foods.<sup>(1)</sup> While the intake of foods at eating occasions has been previously reported,<sup>(1)</sup> little is known about the differences in food consumption between those who have high level of adherence to ADG recommendations and those with lower adherence. The aim of this study is to examine differences in food groups consumed at eating occasions by the level of adherence to dietary guidelines in a nationally representative of Australian adults (19 years and over). This secondary analysis used one 24-h recall from the 2011–2012 National Nutrition and Physical Activity Survey ( $n = 9054$ ). Dietary Guideline Index (DGI) scores were used to assess adherence to ADG recommendations,<sup>(2)</sup> with the top tertile of the DGI score indicating high adherence and bottom two tertiles as lower adherence. Eating occasions self-reported by participants were classified as breakfast, lunch, dinner or snack.<sup>(3)</sup> Mean (95% CI) servings of food groups from the ADGs at eating occasions by gender and age group were estimated. Differences in food group intakes between adults with high and low ADG adherence were assessed using survey-based  $t$ -tests. The results showed that women aged 19–50 years with high levels of adherence consumed more vegetables at breakfast (mean = 0.6 serves; 95% CI [0.1, 1.0]), compared to women with lower levels of adherence. Men and women aged 19–50 years with high adherence consumed more vegetables (men: 0.6 serves, CI [0.2, –0.9], women: 0.3 serves, CI [0.1, –0.5]) while consuming fewer discretionary foods at lunch (men: –1.0 serves, CI [–1.4, –0.7], women: –0.7 serves, CI [–0.9, –0.5]). At dinner, women with high adherence consumed more vegetables, protein foods and fewer discretionary foods, while men with high adherence consumed more fruits and vegetables and fewer discretionary foods (all results  $p < 0.001$ ). At snacks, women with high adherence aged 51–70 years consumed more proteins foods (0.4 serves, CI [0.1, 0.6]), and fewer discretionary foods (–1.1 serves, CI [–1.4, –0.8]), while men with high adherence aged 19–50 years consumed more protein foods (0.5 serves, CI [0.2, 0.7]), and fewer discretionary foods (–1.9 serves, CI [–2.2, –1.6]). In conclusion, this analysis provides insight into how food consumption at different eating occasions differs between adults with high and low levels of adherence to dietary guidelines, by age group and gender. Findings may help develop dietary advice based on eating occasions, which can improve population intake.

### References

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3. Leech R, Spence A, Lacy K, *et al.* (2021) *Int J Behav Nutr Phys Act* **18**, 1–13.