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Plasma lipids and glycaemic indices in Australians following plant-based diets versus a meat-eating diet

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Vegan and vegetarian dietary patterns are known to beneficially modulate risk factors for cardiovascular disease; however, the current literature does not differentiate between various plant-based diets⁽¹⁾. This study aimed to examine the association between various plant-based diets and plasma lipids and glycaemic indices compared to a regular meat-eating diet. A cross-sectional study of Australian adults (n = 230) aged 30–75yrs habitually consuming the following were recruited: vegan, lacto-vegetarian, pesco-vegetarian, semi-vegetarian, or regular meat-eater. Multivariable regression analyses was used to adjust for covariates. Compared to regular meat-eaters, vegans had significantly lower total cholesterol (−0.77 mmol/L, 95% CI −1.15, −0.39, p < 0.001), low-density lipoprotein cholesterol (LDL-C, −0.71 mmol/L, 95% CI −1.05, −0.38, p < 0.001), non-high-density lipoprotein cholesterol (non-HDL-C, −0.75 mmol/L, 95% CI −1.11, −0.39, p < 0.001), total cholesterol/HDL-C-ratio (−0.49 mmol/L, 95% CI −0.87, −0.11, p = 0.012), fasting blood glucose (FBG, −0.29 mmol/L, 95% CI −0.53, −0.06, p = 0.014), haemoglobin A1C (−1.85 mmol/mol, 95% CI −3.00, −0.71, p = 0.002) and insulin (−1.76 mU/L, 95% CI −3.26, −0.26, p = 0.021) concentrations. Semi-vegetarians had significantly lower LDL-C (−0.41 mmol/L, 95% CI −0.74, −0.08, p = 0.041) and non-HDL-C (−0.40 mmol/L, 95% CI −0.76, −0.05, p = 0.026) and lacto-ovo vegetarians had significantly lower FBG (−0.34 mmol/L, 95% CI −0.56, −0.11, p = 0.003) compared to regular meat-eaters. There were no differences in HDL-C and triglycerides between plant-based and regular-meat diets. Plasma lipaemic and glycaemic measures as a collective were more favourable among vegans, whereas among lacto-ovo vegetarians and semi-vegetarians, only some measures were favourable.

References

1. Dybvik JS, Svendsen M & Aune D (2023) *Eur J Nutr* 62(1), 51–69.