



## Adherence to a Mediterranean diet is not associated with severity of menopausal symptoms: a cross-sectional analysis of Australian peri-menopausal and menopausal women

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During the menopausal transition, women often encounter a range of physical and psychological symptoms which negatively impact on health-related quality of life (HRQoL)<sup>(1)</sup>. Diet quality has previously been identified as a modifiable factor associated with mitigating the severity of these symptoms in peri-menopausal and menopausal women<sup>(2)</sup>. We therefore explored the independent associations between adherence to a Mediterranean diet (MedDiet) and the severity of menopausal symptoms in peri-menopausal and menopausal women living in Australia. We also explored the association between MedDiet adherence and HRQoL in this same cohort of women. We conducted a cross-sectional study of Australian peri-menopausal or menopausal women aged between 40 to 60 years. An 86-item self-administered questionnaire was used to assess the relationship between adherence to a MedDiet and severity of symptoms. MedDiet adherence was assessed using the Mediterranean Diet Adherence Screener (MEDAS), the Menopause Rating Scale (MRS) was used to assess the severity of menopausal symptoms related to somatic, psychological and urinary-genital symptoms and the 36-item short form survey instrument (SF-36) was used to assess HRQoL. Multivariable linear regression analysis (and 95% CI) was used to investigate the independent association between adherence to a MedDiet, severity of menopausal symptoms and HRQoL subscales using one unadjusted and five adjusted predictor models. A total of  $n = 207$  participants ( $50.7 \pm 4.3$  years; BMI:  $28.0 \pm 7.4$  kg/m<sup>2</sup>) were included in the final analyses. Participants reported low-moderate adherence to a MedDiet ( $5.2 \pm 1.8$ ; range: 1-11). We showed that MedDiet adherence was not associated with severity of menopausal symptoms. However, when assessing individual dietary constituents of the MEDAS, we showed that low consumption of sugar-sweetened beverages (<250ml per day) was inversely associated with joint and muscle complaints, independent of all covariates ( $\beta = -0.149$ ; CI:  $-0.118, -0.022$ ;  $P = 0.042$ ). Furthermore, adherence to a MedDiet was positively associated with the physical function subscale of HRQoL ( $\beta = 0.173$ , CI: 0.001, 0.029;  $P = 0.031$ ) and a low intake of red and processed meats ( $\leq 1$  serve per day) was positively associated with the general health subscale ( $\beta = 0.296$ , CI: 0.005, 0.014;  $P = <0.001$ ), independent of all covariates used in the fully adjusted model. Our results suggest that diet quality may be related to severity of menopausal symptoms and HRQoL in peri-menopausal and menopausal women. However, exploration of these findings using longitudinal analyses and robust clinical trials are needed to better elucidate these findings.

**Keywords:** Mediterranean diet; menopause; peri-menopause; symptoms

### Ethics Declaration

Yes

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### References

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