

Mediterranean diet supplemented with cholesterol-lowering foods and health-related quality of life in adults with HIV infection

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Highly active antiretroviral therapy has significantly improved life expectancy in people living with HIV⁽¹⁾, but increased cardiovascular risk⁽²⁾, and lower quality of life⁽³⁾ with symptoms of depression and anxiety⁽⁴⁾ remaining. The Mediterranean diet has been shown to improve health-related quality of life (HRQoL), particularly mental health, in the general population⁽⁵⁾. However, no evidence has been produced describing this effect in the HIV population. The aim of this study was to investigate the effect of a Mediterranean diet supplemented with cholesterol lowering foods on HRQoL over 1 year in people with optimally-treated HIV infection.

Sixty adults with HIV infection on antiretroviral treatment and LDL-cholesterol >3 mmol/l were recruited from three West Midlands HIV services into the Best Foods For your heart trial⁽⁶⁾. Participants were randomly assigned, in a 1:1 ratio, to one of two dietary interventions with stratification according to gender and smoking status. Advice given to Diet1 was to reduce saturated fat intake. Diet2 was a Mediterranean Portfolio diet with additional cholesterol-lowering foods (nuts, stanols, soya, oats, pulses). Mental well-being was assessed using the Warwick-Edinburgh Mental Well-being Scale (WEMWBS) and general HRQoL was measured using EuroQOL – five dimensions – five levels (EQ-5D-5L) at baseline, 6 and 12 months.

SD: Standard deviation. MD: Mean difference between groups. CI: confidence interval. Adjusted§ for baseline value. EQ5D-VAS: Visual analogue scale.

	Diet1-Reduced Saturated Fat			Diet2-Mediterranean Portfolio			Diet1 vs Diet2 Adjusted§	
	Mean	SD	n	Mean	SD	n	MD (95%CI)	p value
WEMWBS								
Baseline	53.0	8.2	31	52.7	8.2	28		
Month 6	51.9	12.8	26	54.9	9.3	26	3.2 (–2.1 to 8.6)	0.233
Month 12	53.7	11.7	24	56.0	8.4	27	1.8 (–2.9 to 6.4)	0.455
EQ5D-Index								
Baseline	0.9	0.1	31	0.9	0.2	28		
Month 6	0.9	0.1	26	0.9	0.2	26	–0.01 (–0.07 to 0.05)	0.741
Month 12	0.9	0.1	24	0.9	0.2	27	–0.01 (–0.09 to 0.06)	0.727
EQ5D-VAS								
Baseline	77.1	17.4	31	79.5	17.7	28		
Month 6	79.7	15.2	26	86.0	12.7	26	4.9 (–1.1 to 10.9)	0.109
Month 12	83.9	13.9	24	87.0	13.2	27	2.2 (–3.8 to 8.2)	0.456

HRQoL improved over the 1-year trial period. EQ5D-VAS improved in Diet1 by 5.5 points (SD 13.9, p = 0.06) and Diet2 by 6.8 points (SD 13.6, p = 0.01). In EQ-5D-5L the most frequently reported problems were anxiety/depression (42%); at levels higher than those reported in the general population⁽⁷⁾. Reported problems in the anxiety/depression dimension improved by 10% in Diet1, and 6% in Diet2 at 1 year. There was no significant difference between Diet1 and Diet2 groups. In conclusion, the Mediterranean Portfolio dietary intervention demonstrated no adverse effects on HRQoL, with significant improvement in health state as reported by the EQ5D-VAS. The overall improvement in HRQoL observed in the cohort during the trial could be due to the Hawthorne effect of being observed and receiving additional support.

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