

EDITED PRE-PUBLICATION OC106

Hypocholesterolemic effects of a sodium bicarbonated mineral water in young subjects By M PILAR VAQUERO, ANA M PÉREZ-GRANADOS, SANTIAGO NAVAS-CARRETERO and STEFANIE SCHOPPEN, *Instituto del Frío, ICTAN, Spanish National Research Council (CSIC), Madrid, Spain*

The beneficial role of drinking a sodium bicarbonated mineral water in postprandial lipaemia and cardiovascular risk in healthy postmenopausal women has been described (1, 2). This work aims to study the effect of drinking this mineral water on lipid metabolism in young men and women with moderate cardiovascular risk.

Eighteen young volunteers (ten women and eight men) presenting total cholesterol levels >5.2 mmol/L and without any disease completed the study. The study consisted of two consecutive 8-week intervention periods as described previously (1). Subjects consumed daily 1 litre control mineral water (Font D'Or spring, Vichy Catalán SA. Barcelona, Spain) during the first period and 1 L/d of a sodium bicarbonated mineral water (Vichy Catalán spring, Vichy Catalán SA) during the second period. Food intake, blood pressure, total cholesterol, LDL-cholesterol, HDL-cholesterol, apo B, TAG and glucose were determined. Data were analysed by repeated measures ANOVA.

	Control water		Bicarbonated water		p
	Mean	SD	Mean	SD	
Total cholesterol (mmol/L)	5.78	0.73	5.42	0.67	0.012
HDL-cholesterol (mmol/L)	1.51	0.31	1.56	0.33	NS
LDL-cholesterol (mmol/L)	3.77	0.69	3.41	0.67	0.001
TAG (mmol/L)	1.30	0.65	1.20	0.57	NS
Glucose (mmol/L)	4.85	0.43	4.65	0.31	NS
Apo B (g/L)	1.35	0.41	1.06	0.21	0.017
Systolic blood pressure (mmHg)	120	19	115	18	0.023
Diastolic blood pressure (mmHg)	71	12	72	11	NS

Nutrient intake did not vary between both water periods. Total-cholesterol, LDL-cholesterol, Apo B and systolic blood pressure significantly decreased after consumption of the sodium bicarbonated water. Differences between men and women in water response were not significant. In agreement with previous results (1, 2), consumption of the sodium bicarbonated mineral water reduced cardiovascular risk in young subjects who are moderately hypercholesterolemic.

This study was supported by Vichy Catalán SA, Spain

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