

ESM Table 4 Effects of *DHCR7* rs12785878, *CYP2R1* rs10741657, and *GC* rs2282679 on changes in glucose, insulin, and HOMA-IR in response to low/high protein diets after further adjustment for weight loss

	<i>DHCR7</i> rs12785878				<i>CYP2R1</i> rs10741657				<i>GC</i> rs2282679			
	6 months		2 years		6 months		2 years		6 months		2 years	
	$\beta \pm SE$	<i>P</i>	$\beta \pm SE$	<i>P</i>	$\beta \pm SE$	<i>P</i>	$\beta \pm SE$	<i>P</i>	$\beta \pm SE$	<i>P</i>	$\beta \pm SE$	<i>P</i>
Change in glucose, mmol/l												
Low-protein	0.06 ± 0.04	0.11	0.09 ± 0.04	0.04	-0.01 ± 0.04	0.83	0.01 ± 0.04	0.77	0.01 ± 0.04	0.75	0.02 ± 0.05	0.64
High-protein	0.01 ± 0.04	0.81	-0.02 ± 0.05	0.76	-0.03 ± 0.03	0.39	0.02 ± 0.04	0.62	-0.01 ± 0.04	0.78	-0.01 ± 0.05	0.94
<i>P</i> for interaction		0.45		0.10		0.85		0.94		0.94		0.69
Change in log-insulin, pmol/l												
Low-protein	0.08 ± 0.03	0.02	0.08 ± 0.04	0.02	0.06 ± 0.03	0.07	0.02 ± 0.03	0.49	0.001 ± 0.04	0.84	-0.05 ± 0.04	0.24
High-protein	-0.07 ± 0.03	0.03	-0.04 ± 0.03	0.18	0.01 ± 0.03	0.69	0.01 ± 0.03	0.84	0.02 ± 0.03	0.53	0.02 ± 0.03	0.54
<i>P</i> for interaction		0.001		0.02		0.29		0.67		0.59		0.12
Change in log-HOMA-IR												
Low-protein	0.08 ± 0.03	0.02	0.09 ± 0.04	0.02	0.05 ± 0.03	0.13	0.02 ± 0.04	0.51	0.001 ± 0.04	0.85	-0.05 ± 0.04	0.21
High-protein	-0.07 ± 0.03	0.03	-0.04 ± 0.04	0.26	0.01 ± 0.03	0.84	0.01 ± 0.03	0.78	0.02 ± 0.04	0.63	0.02 ± 0.04	0.56
<i>P</i> for interaction		0.002		0.01		0.34		0.74		0.69		0.11

Data are $\beta \pm SE$, representing effect size for each vitamin-D-increasing allele of *DHCR7* rs12785878 (T-allele), *CYP2R1* rs10741657 (A-allele), and *GC* rs2282679 (A-allele), respectively, on change in each trait, adjusted for age, sex ethnicity, weight loss, and the baseline value for the respective outcome trait.