

**Table S2.** Gene and gene-diet interaction effects with  $P < 0.01^*$  in relation to change in weight or waist

Gene†	Effect	Effect size reading	Effect size, beta (95% confidence interval)		
			Non-carrier	Heterozygote	Homozygote‡
<i>VEGFA</i>	Gene effect on weight change, $P=0.001$	Weight change, kg, by genotype using non-carriers as reference	$n=122$ 0 (reference)	$n=325$ 0.5 (-0.2; 1.1)	$n=191$ 1.2 (0.4; 1.9)
<i>CTNBL1</i>	Gene × fat group effect on waist change, $P=0.0003$	Waist change, cm, for high-fat versus low-fat diet in groups of genotype	$n=543$ 0.8 (0.1; 1.5)	$n=75$ -2.7 (-4.5; -0.9)	$n=3$ Non-applicable
<i>NPC1</i>	Gene × fat group effect on waist change, $P=0.008$	Waist change, cm, for high-fat versus low-fat diet in groups of genotype	$n=87$ 2.1 (0.7; 3.5)	$n=284$ 0.8 (0.1; 1.5)	$n=240$ -0.6 (-1.6; 0.5)

\*Results for *TFAP2B* × fat group effects are presented separately in Figure 2-3.

†SNP information in Table S1.

‡Homozygous for the obesity trait risk-allele.