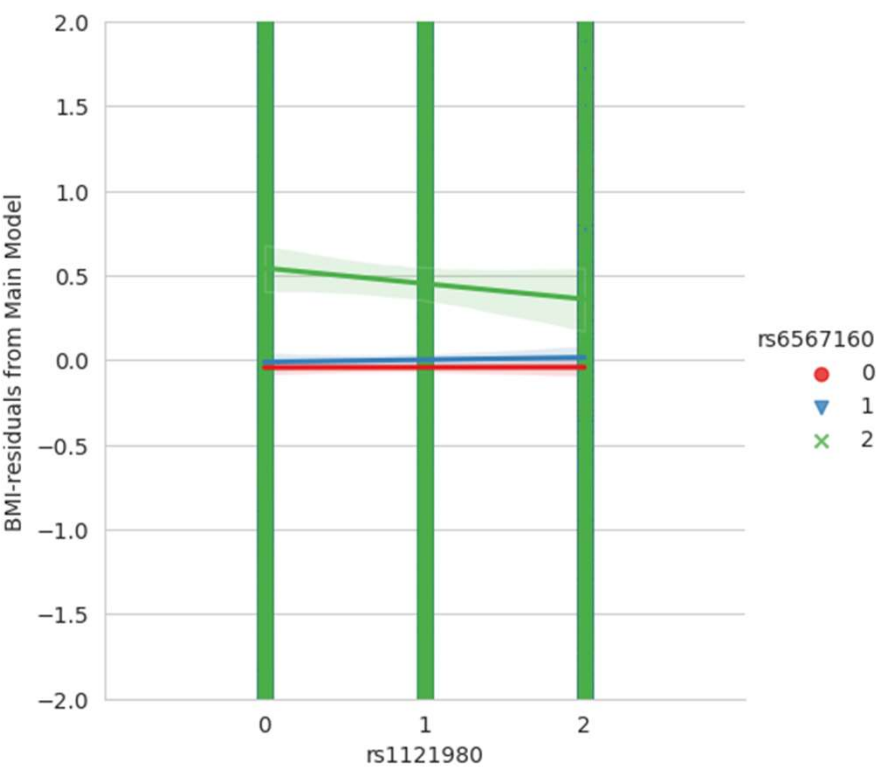
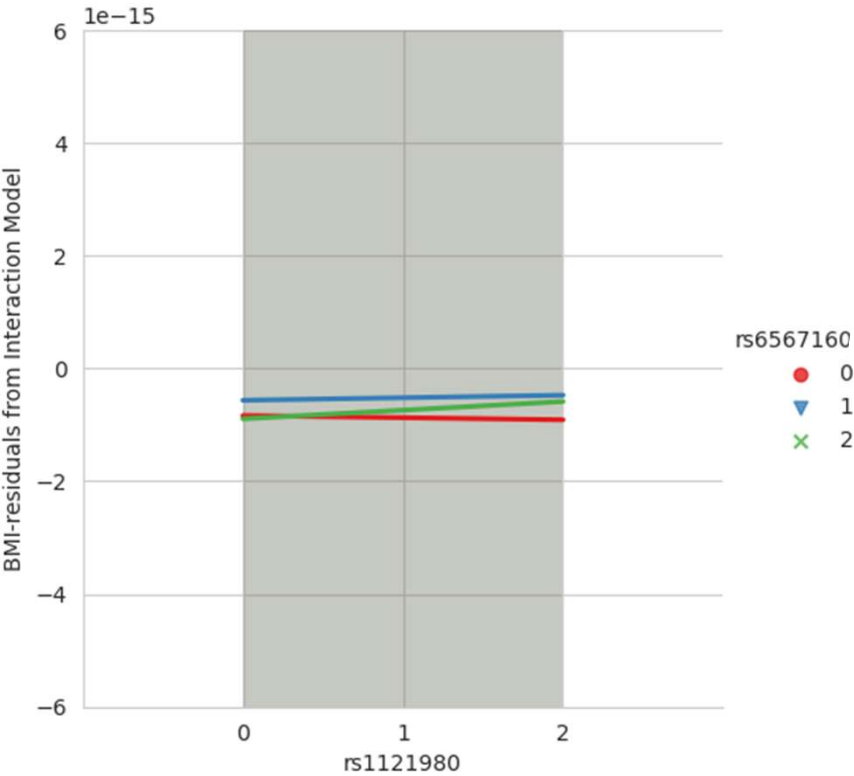


Figure S1: A) Main Effects vs Interaction Effects for SNPs rs1121980 (*FTO*) and rs6567160 (*MC4R*)



$$\widehat{BMI} = \mu + \beta_1 SNP_1 + \beta_2 SNP_2 + \beta_3 Age + \beta_4 Gender$$



$$\widehat{BMI} = \mu + \beta_1 SNP_1 + \beta_2 SNP_2 + \gamma SNP_1 SNP_2 + \beta_3 Age + \beta_4 Gender$$