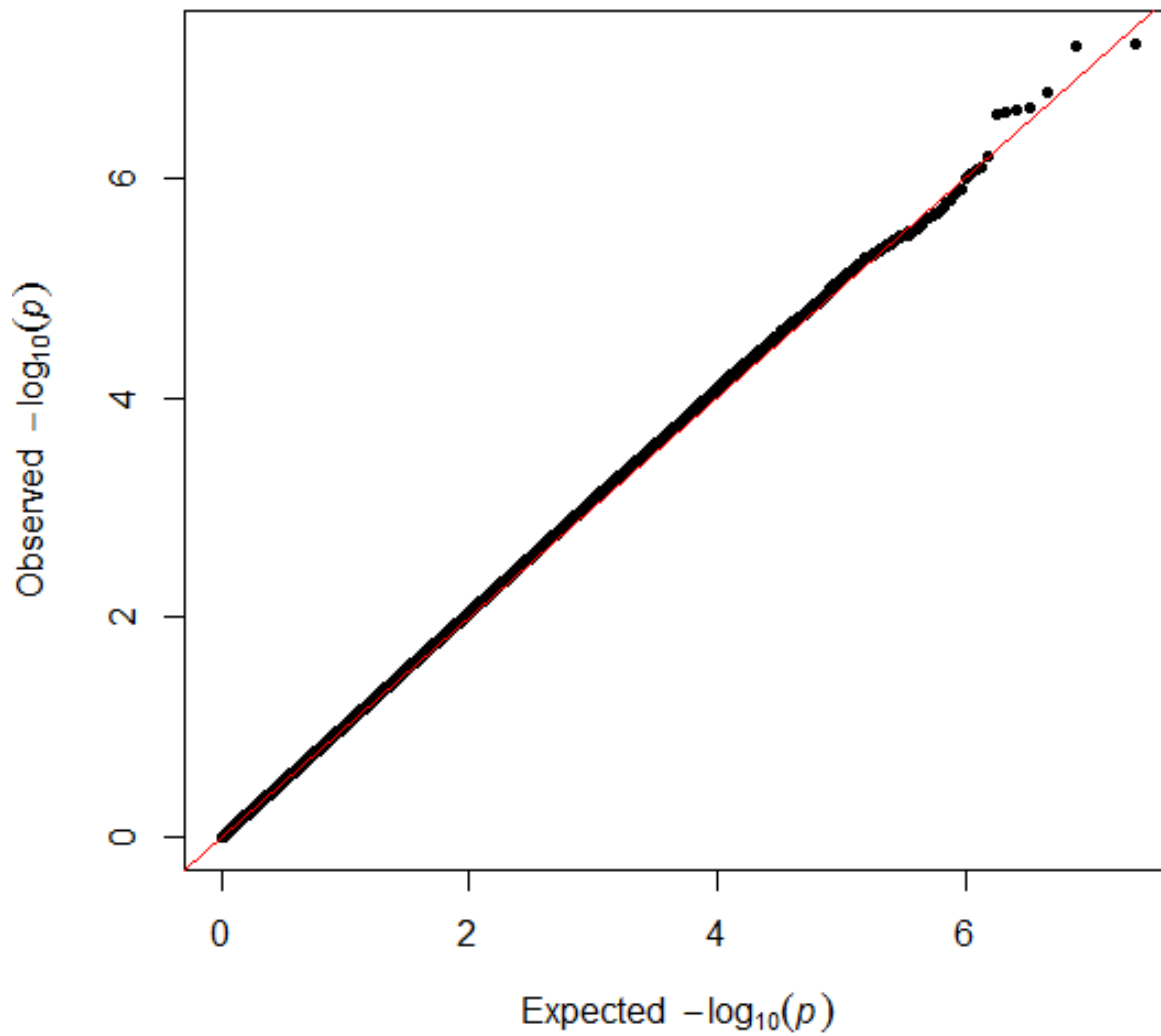


Supplementary Figure 1. Quantile-quantile plots of the BOOST test statistic observed for hypertension. Only interactions with p values $\leq 1 \times 10^{-4}$ were obtained due to the extensive numbers of the epistasis tests conducted. In order to compare the observed values to the expected ones, the p values of all interactions were divided by 1×10^{-4} .



S1 Table. Summary of Characteristics of Case and Control Groups from the Offspring Sample

	Case	Control
Age	49.1(±9.17)	46.5(±9.13)
Sex(male)	53.7%	53.7%
BMI	25.8(±2.67)	25.3 (±2.59)
SBP	143.0(±14.60)	112.7(±7.97)
DBP	89.4(±8.98)	71.7(±5.48)

The numbers presented in the table are the means and standard deviations except for the item of sex. The numbers for sex are the percentage of males in either group. The standard deviations are in the () beside the means.

S2 Table. Summary of Characteristics of Case and Control Groups from the Original Sample

	Case	Control
Age	49.0(±7.63)	48.7(±7.40)
Sex(male)	37.2%	37.2%
BMI	25.0(±2.72)	24.5 (±2.69)
SBP	144.0(±12.08)	114.1(±8.42)
DBP	89.3(±8.01)	72.5(±5.53)

The numbers presented in the table are the means and standard deviations except for the item of sex. The numbers for sex are the percentage of males in either group. The standard deviations are in the () beside the means.

S3 Table. Genotype Counts for SNP Pairs and Odds Ratios Relative to the Double Major Allele Homozygote Genotype in the Original Sample

S3a.

		<i>rs9489622</i>		
	<i>rs4235144</i>	<i>GG</i>	<i>GA</i>	<i>AA</i>
Controls	CC	0	0	0
	CT	0	5	2
	TT	74	185	80
Hypertension	CC	0	0	0
	CT	2	5	0
	TT	82	174	84
OR ^a relative to TT/AA (95% CI)	CC	-	-	-
	CT	-	0.95(0.266-3.415)	-
	TT	1.06(0.681-1.637)	0.90(0.619-1.296)	1

S3b.

		<i>rs3913226</i>		
	<i>rs2058798</i>	<i>TT</i>	<i>TC</i>	<i>CC</i>
Controls	AA	0	0	0
	AG	0	1	6
	GG	12	80	245
Hypertension	AA	0	0	0
	AG	0	0	10
	GG	12	95	217
OR ^a relative to GG/CC (95% CI)	AA	-	-	-
	AG	-	0.38(0.015-9.285)	1.88(0.673-5.263)
	GG	1.13(0.497-2.565)	1.34(0.946-1.901)	1

S3c.

		<i>rs17284390</i>		
	<i>rs1909884</i>	<i>GG</i>	<i>GA</i>	<i>AA</i>
Controls	AA	0	13	40
	AG	2	32	105
	GG	4	32	118
Hypertension	AA	0	13	33
	AG	0	29	120
	GG	0	23	127
OR ^a relative to GG/AA (95% CI)	AA	-	0.93(0.414-2.086)	0.77(0.454-1.295)
	AG	0.19(0.009-3.912)	0.84(0.480-1.476)	1.06(0.739-1.526)
	GG	0.10(0.006-1.939)	0.67(0.370-1.207)	1

S3d.

	rs17688362	rs12484954		
		CC	CG	GG
Controls	TT	4	5	2
	TG	26	50	37
	GG	38	93	78
Hypertension	TT	1	8	5
	TG	11	44	53
	GG	39	101	73
OR ^a relative to GG/GG (95% CI)	TT	0.27(0.029-2.446)	1.71(0.535-5.465)	2.67(0.503-14.199)
	TG	0.45(0.209-0.980)*	0.94(0.561-1.575)	1.53(0.903-2.594)
	GG	1.10(0.633-1.899)	1.16(0.758-1.776)	1

* $P < 0.05$. ^aOR is odds ratio.