

**Supplementary Table 1.** Genomewide association results for BMI, HIP, WST, and WHR-associated SNPs with p-value  $< 5 \times 10^{-8}$  using BOLT-LMM

Trait	Time	Chr	Position	Minor	Major	MAF	Beta	SE	p(BOLT-LMM)
BMI	1	6	141998749	T	C	0.2468	-0.2990	0.0531	$1.70 \times 10^{-8}$
HIP	1	11	48200586	C	T	0.3250	-0.2456	0.0433	$1.40 \times 10^{-8}$
	1	11	48200265	G	A	0.3254	-0.2405	0.0432	$2.80 \times 10^{-8}$
	1	11	48199897	T	C	0.3240	-0.2405	0.0434	$3.00 \times 10^{-8}$
	1	11	48209471	C	T	0.3244	-0.2379	0.0432	$3.80 \times 10^{-8}$
	1	11	48209867	G	A	0.3248	-0.2373	0.0431	$3.80 \times 10^{-8}$
	3	12	118454833	C	G	0.2351	0.6483	0.1158	$2.20 \times 10^{-8}$
	4	12	118461574	T	A	0.2428	0.6143	0.1112	$3.30 \times 10^{-8}$
	4	12	118461574	T	A	0.2428	0.1859	0.0341	$4.90 \times 10^{-8}$
	6	6	148728533	T	C	0.4243	0.6387	0.1101	$6.40 \times 10^{-9}$
WST	1	11	48200586	C	T	0.3250	-0.3697	0.0659	$2.00 \times 10^{-8}$
	1	11	48276491	T	A	0.3490	-0.3867	0.0699	$3.20 \times 10^{-8}$
	1	11	48276493	T	A	0.3490	-0.3867	0.0699	$3.20 \times 10^{-8}$
	1	11	48264835	A	T	0.3202	-0.3612	0.0655	$3.50 \times 10^{-8}$
	1	11	48265966	G	A	0.3207	-0.3594	0.0653	$3.70 \times 10^{-8}$
	1	11	48200265	G	A	0.3254	-0.3625	0.0658	$3.70 \times 10^{-8}$
	1	11	48264183	T	G	0.3208	-0.3590	0.0654	$4.00 \times 10^{-8}$
	1	11	48264647	G	A	0.3208	-0.3590	0.0654	$4.00 \times 10^{-8}$
	1	11	48265379	G	C	0.3208	-0.3590	0.0654	$4.00 \times 10^{-8}$
	1	11	48264370	A	G	0.3209	-0.3580	0.0653	$4.30 \times 10^{-8}$
	1	11	48199897	T	C	0.3239	-0.3610	0.0661	$4.60 \times 10^{-8}$
WHR	2	12	111414461	G	T	0.1458	-0.0027	0.0005	$3.40 \times 10^{-9}$
	2	12	111386127	C	T	0.1432	-0.0028	0.0005	$4.00 \times 10^{-9}$
	2	12	111389437	G	C	0.1441	-0.0027	0.0005	$6.40 \times 10^{-9}$
	2	12	111390454	T	TAGAA	0.1473	-0.0027	0.0005	$6.50 \times 10^{-9}$
	2	12	112337924	A	G	0.1623	-0.0026	0.0004	$8.20 \times 10^{-9}$
	2	12	112468206	T	C	0.1615	-0.0026	0.0005	$9.70 \times 10^{-9}$
	2	12	111367244	T	C	0.1399	-0.0027	0.0005	$1.00 \times 10^{-8}$
	2	12	112230019	C	G	0.1629	-0.0026	0.0004	$1.10 \times 10^{-8}$
	2	12	112241766	A	G	0.1627	-0.0025	0.0004	$1.20 \times 10^{-8}$
	2	12	111518493	G	A	0.1364	-0.0029	0.0005	$1.30 \times 10^{-8}$
	2	12	112511913	C	G	0.1639	-0.0026	0.0005	$1.30 \times 10^{-8}$
	2	12	112645401	A	G	0.1497	-0.0026	0.0005	$1.60 \times 10^{-8}$
	2	12	112119171	C	T	0.1647	-0.0025	0.0004	$2.40 \times 10^{-8}$
	2	12	112627350	A	G	0.1580	-0.0025	0.0005	$2.50 \times 10^{-8}$

2	12	112574616	T	C	0.1672	-0.0025	0.0005	$2.50 \times 10^{-8}$
2	18	48789736	T	A	0.0983	0.0109	0.0020	$2.70 \times 10^{-8}$
5	12	112168009	A	G	0.1636	-0.0025	0.0004	$2.90 \times 10^{-8}$
5	18	48799991	G	A	0.0968	0.0100	0.0018	$4.20 \times 10^{-8}$

BMI, body mass index; HIP, hip circumference; WST, waist circumference; WHR, waist-hip ratio; SNP, single nucleotide polymorphism; LMM, linear mixed model; MAF, minor allele frequency; SE, standard error.