

ESM Table 14 GRSs-obesity interaction effects on risk of diabetes

GRS	Weighting	BMI					Waist Circumference					Waist-Hip Ratio					Percent Body Fat				
		Normal weight	Overweight	Obese	<i>P</i> interaction (Strata)	<i>P</i> interaction (Continuous)	Low	Medium	High	<i>P</i> interaction (Strata)	<i>P</i> interaction (Continuous)	Low	Medium	High	<i>P</i> interaction (Strata)	<i>P</i> interaction (Continuous)	Low	Medium	High	<i>P</i> interaction (Strata)	<i>P</i> interaction (Continuous)
Cases/Controls (n)		1,978 / 39,862	3,386 / 35,711	1,745 / 10,438			1,067 / 30,046	2,017 / 29,075	4,025 / 26,890			1,016 / 30,035	2,370 / 32,074	3,723 / 23,902			1,392 / 29,852	2,180 / 28,727	3,533 / 27,369		
GRS-T	Unweighted	1.09 [1.08-1.10]	1.07 [1.06-1.08]	1.05 [1.04-1.07]	9.21x10 ⁻⁴ *	7.03x10 ⁻⁴ *	1.10[1.08-1.12]	1.08[1.06-1.09]	1.06[1.05-1.07]	1.47x10 ⁻⁴ *	1.78x10 ⁻³ *	1.10[1.08-1.12]	1.07[1.06-1.08]	1.06[1.05-1.07]	2.39x10 ⁻⁴ *	3.02x10 ⁻⁴ *	1.09[1.08-1.11]	1.07[1.06-1.08]	1.06[1.05-1.07]	8.28x10 ⁻⁴ *	6.29x10 ⁻² *
	AGEN-T2D	1.08 [1.07-1.09]	1.07 [1.06-1.07]	1.05 [1.04-1.06]	2.18x10 ⁻⁴ *	2.52x10 ⁻⁴ *	1.09[1.08-1.11]	1.07[1.06-1.08]	1.06[1.05-1.07]	5.31x10 ⁻⁵ *	6.48x10 ⁻⁴ *	1.09[1.08-1.11]	1.07[1.06-1.08]	1.05[1.05-1.06]	1.09x10 ⁻⁶ *	6.08x10 ⁻⁵ *	1.09[1.08-1.11]	1.06[1.05-1.07]	1.06[1.05-1.07]	3.06x10 ⁻⁵ *	2.30x10 ⁻² *
	DIAGRAMv3	1.10 [1.09-1.11]	1.08 [1.07-1.09]	1.05 [1.04-1.07]	3.19x10 ⁻⁶ *	5.28x10 ⁻⁶ *	1.11[1.09-1.12]	1.08[1.07-1.09]	1.06[1.06-1.07]	4.29x10 ⁻⁶ *	1.08x10 ⁻⁴ *	1.11[1.09-1.13]	1.08[1.07-1.09]	1.06[1.05-1.07]	8.23x10 ⁻⁷ *	6.70x10 ⁻⁵ *	1.10[1.09-1.11]	1.08[1.07-1.09]	1.06[1.06-1.07]	2.36x10 ⁻⁵ *	1.94x10 ⁻³ *
	MetaboChip	1.10 [1.09-1.11]	1.08 [1.07-1.09]	1.06 [1.04-1.07]	1.01x10 ⁻⁵ *	1.00x10 ⁻⁵ *	1.11[1.09-1.12]	1.08[1.07-1.09]	1.07[1.06-1.07]	7.70x10 ⁻⁶ *	1.47x10 ⁻⁴ *	1.11[1.10-1.13]	1.08[1.07-1.09]	1.06[1.06-1.07]	1.26x10 ⁻⁶ *	1.88x10 ⁻⁴ *	1.10[1.09-1.11]	1.08[1.07-1.09]	1.07[1.06-1.07]	7.75x10 ⁻⁵ *	1.88x10 ⁻³ *
	TransEthnic	1.10 [1.09-1.11]	1.08 [1.07-1.09]	1.06 [1.05-1.07]	1.45x10 ⁻⁵ *	1.17x10 ⁻⁵ *	1.11[1.10-1.13]	1.08[1.07-1.09]	1.07[1.06-1.08]	9.08x10 ⁻⁶ *	2.60x10 ⁻⁴ *	1.11[1.10-1.13]	1.08[1.07-1.09]	1.07[1.06-1.07]	1.38x10 ⁻⁶ *	1.19x10 ⁻⁴ *	1.10[1.09-1.12]	1.08[1.07-1.09]	1.07[1.06-1.08]	2.86x10 ⁻⁵ *	4.74x10 ⁻³ *
GRS-BC	Unweighted	1.12 [1.10-1.14]	1.09 [1.08-1.10]	1.08 [1.06-1.10]	1.81x10 ⁻³ *	1.17x10 ⁻³ *	1.13[1.11-1.16]	1.09[1.08-1.11]	1.08[1.07-1.09]	4.32x10 ⁻⁴ *	1.19x10 ⁻² *	1.13[1.11-1.15]	1.10[1.09-1.12]	1.08[1.06-1.09]	1.32x10 ⁻⁴ *	2.95x10 ⁻³ *	1.12[1.10-1.14]	1.10[1.08-1.11]	1.08[1.07-1.09]	1.45x10 ⁻³ *	3.35x10 ⁻² *
	AGEN-T2D	1.12 [1.11-1.14]	1.09 [1.08-1.11]	1.08 [1.06-1.10]	1.90x10 ⁻³ *	2.08x10 ⁻³ *	1.14[1.12-1.16]	1.10[1.08-1.11]	1.08[1.07-1.10]	3.07x10 ⁻⁴ *	4.91x10 ⁻³ *	1.14[1.11-1.16]	1.11[1.10-1.13]	1.07[1.06-1.09]	1.60x10 ⁻⁶ *	2.47x10 ⁻⁴ *	1.13[1.11-1.15]	1.10[1.08-1.11]	1.08[1.07-1.10]	1.24x10 ⁻³ *	4.81x10 ⁻² *
	DIAGRAMv3	1.13 [1.12-1.15]	1.10 [1.08-1.11]	1.07 [1.06-1.09]	1.17x10 ⁻⁵ *	4.71x10 ⁻⁶ *	1.15[1.13-1.17]	1.10[1.08-1.12]	1.09[1.07-1.10]	9.85x10 ⁻⁶ *	4.02x10 ⁻⁴ *	1.14[1.12-1.17]	1.11[1.09-1.12]	1.08[1.07-1.09]	4.15x10 ⁻⁶ *	9.00x10 ⁻⁴ *	1.13[1.12-1.15]	1.10[1.09-1.12]	1.08[1.07-1.09]	1.90x10 ⁻⁵ *	5.63x10 ⁻⁴ *
	MetaboChip	1.13 [1.12-1.15]	1.10 [1.09-1.11]	1.08 [1.06-1.10]	6.66x10 ⁻⁵ *	2.27x10 ⁻⁵ *	1.15[1.13-1.17]	1.10[1.09-1.12]	1.09[1.08-1.10]	3.73x10 ⁻⁵ *	9.88x10 ⁻⁴ *	1.15[1.13-1.17]	1.11[1.09-1.12]	1.08[1.07-1.10]	5.53x10 ⁻⁶ *	2.11x10 ⁻³ *	1.14[1.12-1.16]	1.11[1.09-1.13]	1.09[1.07-1.10]	6.58x10 ⁻⁵ *	1.11x10 ⁻³ *
	TransEthnic	1.13 [1.11-1.15]	1.10 [1.09-1.11]	1.08 [1.06-1.10]	8.86x10 ⁻⁵ *	3.51x10 ⁻⁵ *	1.15[1.13-1.17]	1.10[1.08-1.12]	1.09[1.08-1.10]	7.03x10 ⁻⁵ *	1.67x10 ⁻³ *	1.14[1.12-1.17]	1.11[1.09-1.12]	1.08[1.07-1.09]	3.59x10 ⁻⁶ *	1.18x10 ⁻³ *	1.13[1.11-1.15]	1.11[1.09-1.12]	1.09[1.07-1.10]	8.74x10 ⁻⁵ *	3.06x10 ⁻³ *
GRS-IR	Unweighted	1.05 [1.02-1.09]	1.06 [1.03-1.08]	1.05 [1.01-1.09]	0.83	0.91	1.08[1.03-1.12]	1.05[1.02-1.09]	1.05[1.02-1.07]	0.30	0.61	1.09[1.04-1.14]	1.04[1.01-1.07]	1.05[1.02-1.07]	0.24	0.70	1.05[1.01-1.09]	1.05[1.02-1.08]	1.07[1.04-1.09]	0.39	0.68
	AGEN-T2D	1.05 [1.01-1.08]	1.05 [1.02-1.08]	1.04 [1.00-1.07]	0.69	0.70	1.07[1.03-1.12]	1.05[1.02-1.09]	1.04[1.01-1.06]	0.13	0.37	1.10[1.05-1.15]	1.03[1.00-1.06]	1.04[1.01-1.06]	0.11	0.19	1.06[1.02-1.10]	1.03[1.00-1.06]	1.06[1.03-1.09]	0.68	0.89
	DIAGRAMv3	1.06 [1.02-1.09]	1.05 [1.02-1.08]	1.03 [0.99-1.07]	0.32	0.83	1.07[1.02-1.12]	1.06[1.03-1.10]	1.03[1.01-1.06]	0.17	0.67	1.11[1.05-1.16]	1.03[1.00-1.07]	1.04[1.01-1.06]	0.07	0.68	1.05[1.01-1.09]	1.05[1.02-1.09]	1.05[1.02-1.08]	0.97	0.93
	MetaboChip	1.07 [1.03-1.11]	1.06 [1.03-1.09]	1.03 [0.99-1.07]	0.19	0.54	1.08[1.03-1.14]	1.07[1.04-1.11]	1.04[1.01-1.06]	0.06	0.39	1.11[1.06-1.17]	1.03[1.00-1.07]	1.05[1.02-1.07]	0.11	0.56	1.06[1.01-1.11]	1.05[1.01-1.09]	1.06[1.03-1.09]	0.91	0.69
	TransEthnic	1.06 [1.03-1.11]	1.06 [1.03-1.09]	1.04 [1.00-1.08]	0.37	0.80	1.09[1.03-1.14]	1.07[1.03-1.11]	1.04[1.01-1.07]	0.11	0.51	1.11[1.06-1.17]	1.04[1.00-1.07]	1.05[1.02-1.08]	0.15	0.57	1.06[1.01-1.11]	1.05[1.01-1.09]	1.07[1.04-1.10]	0.72	0.95

BMI strata were defined according to Asian criteria proposed by WHO: Normal weight, <23 kg/m²; Overweight, 23-27.5 kg/m²; Obese, ≥27.5 kg/m²

Sex-specific tertiles were used to define:

waist circumference strata (Low, male <76.9 cm, female <74.4 cm; Medium male ≥76.9-86.1 cm, female ≥74.4-82.8 cm; High, male ≥86.1 cm, female ≥82.8 cm),

Waist-hip ratio strata (Low, male <0.88, female <0.84; Medium male ≥0.88-0.94, female ≥0.84-0.91; High, male ≥0.94, female ≥0.91),

Percent body fat (Low, male <18.8%, female <28.8%; Medium male ≥18.8-24.5%, female ≥28.8-34.9%; High, male ≥24.5%, female ≥34.9%)

**p* <0.05/12=0.0042