

SUPPLEMENTARY DATA

**Supplementary Table 1.** Insulin sensitivity and body composition between the ethnic groups, stratified by %body fat in tertiles.

	%body fat category	Chinese (n=101)	Malays (n=82)	South Asians (n=81)	*P
Insulin sensitivity, mg/min.kg/mU/ml	Low (<19.9%)	9.97 ± 3.32	12.07 ± 4.99	8.28 ± 3.28	<b>0.022</b>
	Medium (19.9-26.0%)	7.19 ± 3.11	7.24 ± 4.20	6.07 ± 2.49	0.353
	High (>26.0%)	4.62 ± 2.42	4.40 ± 1.76	4.07 ± 2.22	0.913
	P trend	<b>&lt;0.001</b>	<b>&lt;0.001</b>	<b>&lt;0.001</b>	
Body mass index, kg/m <sup>2</sup>	Low (<19.9%)	21.1 ± 1.7	21.1 ± 1.64	22.2 ± 2.3	<b>0.031</b>
	Medium (19.9-26.0%)	24.2 ± 2.6	24.6 ± 2.3	23.8 ± 2.8	0.600
	High (>26.0%)	25.4 ± 2.5	27.6 ± 1.9	26.8 ± 2.4	<b>0.030</b>
	P trend	<b>&lt;0.001</b>	<b>&lt;0.001</b>	<b>&lt;0.001</b>	
Total lean mass, kg	Low (<19.9%)	49.23 ± 4.94	48.78 ± 5.35	50.93 ± 5.40	0.088
	Medium (19.9-26.0%)	52.26 ± 7.00	51.89 ± 6.22	52.24 ± 5.54	0.716
	High (>26.0%)	50.32 ± 6.18	53.06 ± 5.15	52.65 ± 6.53	0.231
	P trend	0.134	<b>0/010</b>	0/957	
Intramyocellular lipids	Low (<19.9%)	7.81 ± 3.22	7.05 ± 2.34	10.60 ± 9.19	<b>0.011</b>
	Medium (19.9-26.0%)	9.85 ± 3.95	9.58 ± 4.79	14.37 ± 6.70	<b>&lt;0.001</b>
	High (>26.0%)	10.38 ± 4.62	13.65 ± 4.97	16.02 ± 7.38	<b>0.001</b>
	P trend	0.101	<b>&lt;0.001</b>	0.539	
Liver fat content, %	Low (<19.9%)	4.75 ± 4.10	3.42 ± 3.10	4.88 ± 6.09	0.370
	Medium (19.9-26.0%)	9.24 ± 6.94	8.10 ± 10.24	9.19 ± 11.31	0.885
	High (>26.0%)	16.71 ± 10.25	16.24 ± 10.15	15.39 ± 9.85	0.717
	P trend	<b>&lt;0.001</b>	<b>&lt;0.001</b>	<b>0.008</b>	
Subcutaneous adipose tissue, x 10 <sup>3</sup> cm <sup>3</sup>	Low (<19.9%)	1.23 ± 0.42	1.10 ± 0.43	1.46 ± 0.46	0.103
	Medium (19.9-26.0%)	2.31 ± 0.76	2.34 ± 0.57	2.59 ± 0.73	0.166
	High (>26.0%)	3.05 ± 0.82	3.88 ± 1.05	4.06 ± 1.23	0.070

SUPPLEMENTARY DATA

	P trend	<b>&lt;0.001</b>	<b>&lt;0.001</b>	<b>&lt;0.001</b>	
Visceral adipose tissue, x 10 <sup>3</sup> cm <sup>3</sup>	Low (<19.9%)	0.55 ± 0.25	0.43 ± 0.14	0.55 ± 0.29	0.180
	Medium (19.9-26.0%)	1.04 ± 0.47	1.00 ± 0.43	1.04 ± 0.67	0.222
	High (>26.0%)	1.83 ± 0.62	1.69 ± 0.60	1.68 ± 0.49	0.972
	P trend	<b>&lt;0.001</b>	<b>&lt;0.001</b>	<b>&lt;0.001</b>	
Deep subcutaneous adipose tissue, x 10 <sup>3</sup> cm <sup>3</sup>	Low (<19.9%)	0.32 ± 0.19	0.29 ± 0.22	0.48 ± 0.22	<b>0.029</b>
	Medium (19.9-26.0%)	0.85 ± 0.46	0.98 ± 0.41	1.07 ± 0.42	0.199
	High (>26.0%)	1.32 ± 0.40	1.90 ± 0.69	2.10 ± 0.85	<b>0.042</b>
	P trend	<b>&lt;0.001</b>	<b>&lt;0.001</b>	<b>&lt;0.001</b>	
Superficial subcutaneous adipose tissue, x 10 <sup>3</sup> cm <sup>3</sup>	Low (<19.9%)	0.82 ± 0.23	0.74 ± 0.20	0.91 ± 0.21	0.064
	Medium (19.9-26.0%)	1.30 ± 0.28	1.32 ± 0.20	1.34 ± 0.27	0.546
	High (>26.0%)	1.62 ± 0.24	1.74 ± 0.31	1.75 ± 0.34	0.310
	P trend	<b>&lt;0.001</b>	<b>&lt;0.001</b>	<b>&lt;0.001</b>	
Visceral-to-subcutaneous adipose tissue ratio	Low (<19.9%)	0.46 ± 0.19	0.43 ± 0.16	0.38 ± 0.16	0.221
	Medium (19.9-26.0%)	0.48 ± 0.24	0.45 ± 0.22	0.41 ± 0.21	0.526
	High (>26.0%)	0.62 ± 0.20	0.46 ± 0.19	0.43 ± 0.15	0.101
	P trend	0.615	0.896	0.981	
Deep-to-superficial subcutaneous adipose tissue ratio	Low (<19.9%)	0.38 ± 0.13	0.35 ± 0.18	0.51 ± 0.14	<b>0.014</b>
	Medium (19.9-26.0%)	0.62 ± 0.21	0.72 ± 0.21	0.78 ± 0.20	<b>0.027</b>
	High (>26.0%)	0.81 ± 0.17	1.07 ± 0.26	1.17 ± 0.25	<b>0.005</b>
	P trend	<b>&lt;0.001</b>	<b>&lt;0.001</b>	<b>&lt;0.001</b>	

\*Panova for comparison between the ethnic groups with each %body fat category.

Ptrend for the comparison between %body fat categories within each ethnic group.

All analyses were adjusted for age.

SUPPLEMENTARY DATA

**Supplementary Figure 1.** Representative Immunoblot analysis of p-Akt levels in human primary myoblasts isolated from low and high %body fat Chinese and South Asian individuals at basal level (0 $\mu$ M), or following treatment with increasing concentrations of insulin (0.01 $\mu$ M, 0.1 $\mu$ M and 1 $\mu$ M). Tubulin levels were assessed to ensure equal loading.

