

Supplementary Table SIII Estimated percent changes and 95% CIs for semen quality parameters (using first sample only) associated with underweight, overweight and obesity compared with normal weight^a.

Characteristic	Underweight		Normal Percent change (95% CI)	Overweight		Obese	
	Percent change (95% CI)	P		Percent change (95% CI)	P	Percent change (95% CI)	P
Semen volume, ml	-11.6 (-17.8, -5.0)	<0.001	0 (ref.)	-7.0 (-11.0, -2.8)	0.001	6.4 (-9.9, 25.8)	0.46
Sperm concentration, 10 ⁶ /ml	-5.2 (-11.8, 2.0)	0.15	0 (ref.)	-0.2 (-4.5, 4.4)	0.94	12.9 (-4.5, 33.4)	0.15
Total sperm number, 10 ⁶	-16.1 (-24.8, -6.5)	0.002	0 (ref.)	-7.2 (-13.2, -0.7)	0.030	20.1 (-6.6, 54.6)	0.15
Total motility, %	-1.4 (-3.9, 1.1)	0.27	0 (ref.)	-0.2 (-1.8, 1.3)	0.76	0.1 (-5.6, 6.2)	0.96
Progressive motility, %	-1.2 (-4.0, 1.6)	0.40	0 (ref.)	-0.0 (-1.8, 1.7)	0.97	0.9 (-5.7, 7.7)	0.80
Total motile sperm count, 10 ⁶	-17.3 (-26.2, -7.4)	0.001	0 (ref.)	-7.4 (-13.6, -0.7)	0.03	20.3 (-7.5, 56.5)	0.17

^aBMI was categorized using the WHO criteria: underweight (<18.5 kg/m²), normal weight (18.5–24.9 kg/m²), overweight (25–29.9 kg/m²) and obese (≥30 kg/m²). Linear regression models were used to estimate percent changes and 95% CIs with adjustment for age, ethnicity, education, smoking, marital status, abstinence period and season.