

**Supplementary Table SIV** Sensitivity analyses for reproductive hormone concentrations<sup>a</sup> among men at a fertility center who reported most frequently wearing boxers compared to men who did not.

Type of underwear	FSH (IU/L)	LH (IU/L)	Testosterone (ng/dL)	Prolactin (ng/mL)	Estradiol (pg/mL)	SHBG (nmol/mL)	Inhibin B (pg/mL)
Adjusted <sup>b</sup>							
Primarily wearing boxers	7.21 (6.69, 7.78)	9.57 (8.93, 10.2)	413 (394, 432)	11.5 (10.8, 12.3)	29.2 (27.4, 30.9)	24.6 (23.2, 26.0)	180 (168, 191)
Not primarily wearing boxers	8.20 (7.55, 8.91)	9.91 (9.19, 10.7)	422 (402, 443)	12.0 (11.2, 12.9)	28.2 (26.3, 30.1)	26.7 (24.8, 28.1)	167 (155, 180)
P-value	0.03	0.50	0.49	0.38	0.48	0.09	0.16
Adjusted <sup>b</sup> + history of varicocele							
Primarily wearing boxers	7.24 (6.58, 7.96)	10.1 (9.24, 11.0)	421 (397, 445)	11.3 (10.4, 12.2)	30.9 (28.7, 33.0)	24.5 (22.9, 26.3)	163 (152, 175)
Not primarily wearing boxers	8.18 (7.40, 9.05)	10.4 (9.5, 11.4)	434 (410, 459)	12.5 (11.5, 13.6)	30.7 (28.4, 32.9)	26.2 (24.4, 28.2)	152 (140, 164)
P-value	0.08	0.60	0.44	0.10	0.89	0.20	0.19
Adjusted <sup>b</sup> + hot bath/jacuzzi							
Primarily wearing boxers	7.21 (6.69, 7.78)	9.57 (8.93, 10.2)	413 (394, 431)	11.5 (10.8, 12.3)	29.2 (27.4, 30.9)	24.6 (23.2, 26.0)	180 (168, 191)
Not primarily wearing boxers	8.20 (7.55, 8.91)	9.91 (9.19, 10.7)	422 (402, 443)	12.0 (11.2, 12.9)	28.2 (26.3, 30.1)	26.4 (24.8, 28.0)	167 (155, 180)
P-value	0.03	0.50	0.49	0.38	0.48	0.09	0.17
Adjusted <sup>b</sup> , restricted first semen sample							
Primarily wearing boxers	7.21 (6.69, 7.78)	9.57 (8.93, 10.2)	413 (394, 432)	11.5 (10.8, 12.3)	29.2 (27.4, 30.9)	24.6 (23.2, 26.0)	180 (168, 191)
Not primarily wearing boxers	8.20 (7.55, 8.91)	9.91 (9.19, 10.7)	422 (402, 443)	12.0 (11.2, 12.9)	28.2 (26.3, 30.1)	26.7 (24.8, 28.1)	167 (155, 180)
P-value	0.03	0.50	0.49	0.38	0.48	0.09	0.16

<sup>a</sup>Data are presented as predicted marginal means (95% CI).

<sup>b</sup>Models are adjusted for age (continuous), BMI (continuous), smoking status (ever and never smoked), time to blood sampling (continuous) and year of serum sample collection (continuous).

SHBG, sex hormone-binding globulin.