

**Supplemental Table 1. Subject characteristics before hormonal intervention**

	PRE		POST		P value*		
	E <sub>2</sub> -deplete (N = 10)	E <sub>2</sub> -replete (N = 10)	E <sub>2</sub> -deplete (N = 12)	E <sub>2</sub> -replete (N = 10)	Age	E <sub>2</sub>	Age*E <sub>2</sub>
Age (years)	23 ± 0.62	25 ± 1.1	63 ± 2.2	64 ± 1.4	< 0.001	—	—
BMI (kg/m <sup>2</sup> )	26 ± 0.75	23 ± 0.97	25 ± 1.1	26 ± 1.2	0.22	0.34	0.12
AVF (cm <sup>2</sup> )	40 ± 6.6	21 ± 2.7	89 ± 16	60 ± 8.5	< 0.001	0.026	0.66
FSH (IU/L)	5.0 ± 0.90	3.6 ± 0.56	87 ± 8.0	72 ± 7.4	< 0.001	0.093	0.96
LH (IU/L)	5.2 ± 1.3	5.2 ± 0.94	34 ± 3.1	42 ± 3.7	< 0.001	0.081	0.68
E <sub>2</sub> (pg/mL)	77 ± 11	106 ± 29	< 35	< 35	< 0.001	0.32	0.32
T (ng/dL)	29 ± 2.6	31 ± 5.9	19 ± 4.1	21 ± 3.8	0.024	0.64	0.92
SHBG (nmol/L)	73 ± 16	92 ± 15	46 ± 7.4	71 ± 13	0.74	0.11	0.82
Prolactin (µg/L)	9.1 ± 1.5	13 ± 1.9	6.6 ± 0.54	7.5 ± 0.36	0.001	0.044	0.19
IGF-I (µg/L)	405 ± 23	484 ± 45	214 ± 23	207 ± 26	< 0.001	0.28	0.2
IGFBP-1 (µg/L)	9.5 ± 2.3	16 ± 3.8	20 ± 5.2	27 ± 5.0	0.015	0.12	0.95

IGFBP-3 ( $\mu\text{g/L}$ )	5439 $\pm$ 218	5604 $\pm$ 255	4466 $\pm$ 364	4662 $\pm$ 176	< 0.001	0.52	0.95
Albumin (g/L)	4.6 $\pm$ 0.056	4.6 $\pm$ 0.10	4.3 $\pm$ 0.59	4.3 $\pm$ 0.039	< 0.001	0.73	0.79

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\*P value for main effect or interaction via 2-way ANOVA.

Data are the mean  $\pm$  SEM for *N* as indicated.

Age\*E<sub>2</sub> denotes age-by-estrogen interaction.

Multiply E<sub>2</sub> concentration by 3.68 to convert pg/mL to pmol/L.

Multiply T concentration by 0.0347 to convert ng/dL to nmol/L.

E<sub>2</sub> and T were determined by immunoassay.