

**Supplemental Table 1.** Anthropometric and metabolic parameters of the female cohort according to the menopausal (MP) status and to body mass index (BMI) classes. Non-italicized data show the mean±SD values of the parameters; italicized data show the P values (sign of the coefficients) of the effects evaluated by means of two-way ANOVA. Significant P values are reported in bold

Anthropometric and metabolic parameters	Cohort	Overall	BMI classes			Effect of BMI <sup>§</sup>
			NW	OW	OB	P value
No. of cases	Premenopausal	103 (100%)	60 (58.2%)	17 (16.5%)	26 (25.2%)	-
	Menopausal	81 (100%)	29 (35.8%)	33 (40.7%)	19 (23.5%)	-
Age (years)	Premenopausal	39.6±8.0	39.0±8.6	41.1±6.7	39.9±7.5	<i>0.653 (+)</i>
	Menopausal	61.7±9.1	60.4±8.9	62.6±9.4	62.3±9.1	<i>0.436 (+)</i>
	<i>Effect of MP: P values*</i>	<b>&lt;0.001 (+)</b>	<b>&lt;0.001 (+)</b>	<b>&lt;0.001 (+)</b>	<b>&lt;0.001 (+)</b>	<i>0.741 (+)<sup>§</sup></i>
BMI (kg/m <sup>2</sup> )	Premenopausal	26.0±6.1	21.8±1.8	27.0±1.2	35.1±3.7	<b>&lt;0.001 (+)</b>
	Menopausal	26.9±5.1	22.3±1.8	26.9±1.3	33.9±4.9	<b>&lt;0.001 (+)</b>
	<i>Effect of MP: P values*</i>	<i>0.996 (+)</i>	<i>0.136 (+)</i>	<i>0.921 (-)</i>	<i>0.311 (-)</i>	<i>0.089 (-)<sup>§</sup></i>
Waist circumference (cm)	Premenopausal	86.1±15.2	76.5±7.4	88.7±9.7	106.5±9.5	<b>&lt;0.001 (+)</b>
	Menopausal	90.0±11.8	80.9±8.7	89.8±5.7	104.1±10.2	<b>&lt;0.001 (+)</b>
	<i>Effect of MP: P values*</i>	<i>0.287 (+)</i>	<b><i>0.009 (+)</i></b>	<i>0.566 (+)</i>	<i>0.404 (-)</i>	<b><i>0.026 (-)<sup>§</sup></i></b>
SBP (mmHg)	Premenopausal	120±13	116±10	125±15	127±15	<b>&lt;0.001 (+)</b>
	Menopausal	134±19	131±18	132±19	142±20	<b><i>0.047 (+)</i></b>
	<i>Effect of MP: P values*</i>	<b>&lt;0.001 (+)</b>	<b>&lt;0.001 (+)</b>	<i>0.157 (+)</i>	<b><i>0.006 (+)</i></b>	<i>0.580 (-)<sup>§</sup></i>
DBP (mmHg)	Premenopausal	78±8	76±7	81±7	81±9	<b><i>0.014 (+)</i></b>
	Menopausal	82±9	81±7	81±9	87±10	<b><i>0.009 (+)</i></b>
	<i>Effect of MP: P values*</i>	<b><i>0.006 (+)</i></b>	<b><i>0.016 (+)</i></b>	<i>0.894 (+)</i>	<b><i>0.015 (+)</i></b>	<i>0.614 (+)<sup>§</sup></i>
Glucose (mg/dL)	Premenopausal	88.6±10.3	86.4±8.4	89.5±9.5	92.9±13.3	<b><i>0.039 (+)</i></b>
	Menopausal	92.9±14.8	90.6±13.5	93.8±16.1	95.1±14.5	<i>0.265 (+)</i>
	<i>Effect of MP: P values*</i>	<i>0.147 (+)</i>	<i>0.189 (+)</i>	<i>0.377 (+)</i>	<i>0.649 (+)</i>	<i>0.666 (-)<sup>§</sup></i>
Insulin (μU/mL)	Premenopausal	7.29±4.21	5.53±2.27	6.93±2.81	11.74±5.29	<b>&lt;0.001 (+)</b>
	Menopausal	7.88±3.97	6.28±2.72	7.84±3.81	10.38±4.69	<b>&lt;0.001 (+)</b>
	<i>Effect of MP: P values*</i>	<i>0.446 (+)</i>	<i>0.128 (+)</i>	<i>0.341 (+)</i>	<i>0.390 (-)</i>	<i>0.111 (-)<sup>§</sup></i>
HOMA-IR	Premenopausal	1.62±1.00	1.18±0.54	1.56±0.72	2.67±1.21	<b>&lt;0.001 (+)</b>
	Menopausal	1.85±1.12	1.45±0.79	1.85±1.09	2.49±1.34	<b>&lt;0.001 (+)</b>
	<i>Effect of MP: P values*</i>	<i>0.235 (+)</i>	<i>0.067 (+)</i>	<i>0.266 (+)</i>	<i>0.559 (-)</i>	<i>0.117 (-)<sup>§</sup></i>
Total cholesterol (mg/dL)	Premenopausal	182.9±32.4	180.8±32.7	191.7±36.5	181.8±29.2	<i>0.810 (+)</i>
	Menopausal	208.7±25.6	209.8±29.9	208.3±22.3	207.5±25.1	<i>0.850 (-)</i>
	<i>Effect of MP: P values*</i>	<b>&lt;0.001 (+)</b>	<b>&lt;0.001 (+)</b>	<b><i>0.045 (+)</i></b>	<b><i>0.004 (+)</i></b>	<i>0.766 (-)<sup>§</sup></i>
HDL-cholesterol (mg/dL)	Premenopausal	59.4±14.2	61.9±13.0	61.0±9.6	52.8±17.5	<b><i>0.002 (-)</i></b>
	Menopausal	59.8±14.2	63.3±11.8	59.9±16.3	54.1±12.6	<b><i>0.015 (-)</i></b>
	<i>Effect of MP: P values*</i>	<i>0.820 (+)</i>	<i>0.592 (+)</i>	<i>0.605 (-)</i>	<i>0.637 (+)</i>	<i>0.955 (+)<sup>§</sup></i>
Triglycerides (mg/dL)	Premenopausal	71.1±32.0	63.0±21.5	73.5±26.7	88.3±46.4	<b><i>0.003 (+)</i></b>
	Menopausal	101.5±46.9	87.0±41.9	117.2±55.3	96.5±28.1	<i>0.111 (+)</i>
	<i>Effect of MP: P values*</i>	<b>&lt;0.001 (+)</b>	<b><i>0.003 (+)</i></b>	<b><i>0.001 (+)</i></b>	<i>0.147 (+)</i>	<i>0.523 (-)<sup>§</sup></i>

NW: normal weight; OW: overweight; OB: obese; MP: menopause; SBP: systolic blood pressure; DBP: diastolic blood pressure; HOMA-IR: homeostatic model assessment – insulin resistance; HDL: high density lipoprotein.

<sup>§</sup> Effect of BMI on anthropometric and metabolic parameters. Positive effect (+): values increased with increasing BMI classes; negative effect (-): values decreased with increasing BMI classes. \* Effect of MP on anthropometric and metabolic parameters. Positive effect (+): higher values in menopausal than in premenopausal females; negative effect (-): lower values in menopausal than in premenopausal females. <sup>§</sup> Interaction between BMI and MP effects on anthropometric and metabolic parameters. Positive interaction (+): the positive (or negative) effect of BMI is higher (or lower) in menopausal than in premenopausal females (i.e., the positive (or negative) effect of MP increased (or decreased) with increasing BMI). Negative interaction (-): the positive (or negative) effect of BMI is lower (or higher) in menopausal than in premenopausal females (i.e., the positive (or negative) effect of MP decreased (or increased) with increasing BMI).