

Supplemental Table 3. Effects of menopause (MP), body mass index (BMI) and of their interaction on N-acyl ethanolamine (NAE) circulating levels and their ratios in the female cohort. Data are shown as P values (sign of the coefficients) of the evaluated effects: non italic data show first order (main) effects; italic data show second order effects (i.e., the interactions between the two main effects). Significant P values are reported in bold

NAE	Factors	Cohort	Unadjusted [‡] effects	Effects evaluated after adjusting for each metabolic parameter [⊘]								
				Waist circumference	SBP	DBP	Glucose	Insulin	HOMA-IR	Total cholesterol	HDL-cholesterol	Triglycerides
AEA	Effect of MP*	Overall	0.136 (+)	0.391 (-)	0.454 (+)	0.065 (+)	0.834 (+)	0.587 (+)	0.240 (+)	0.145 (+)	0.815 (-)	0.091 (-)
		- NW	0.021 (+)	0.518 (-)	0.939 (-)	0.565 (+)	0.053 (-)	0.462 (+)	0.092 (+)	0.787 (+)	0.309 (-)	0.966 (-)
		- OW	0.450 (+)	0.551 (-)	0.196 (+)	0.120 (+)	0.088 (+)	0.928 (-)	0.454 (+)	0.538 (+)	0.613 (-)	0.836 (+)
		- OB	0.920 (-)	0.743 (-)	0.955 (+)	0.337 (+)	0.936 (-)	0.663 (+)	0.758 (+)	0.146 (+)	0.214 (+)	0.018 (-)
	Effect of BMI [§]	Pre-menopausal	<0.001 (+)	0.823 (-)	0.928 (-)	0.330 (-)	0.552 (-)	0.174 (+)	0.010 (+)	0.373 (+)	0.469 (-)	0.001 (+)
	Menopausal	0.004 (+)	0.909 (-)	0.967 (+)	0.725 (-)	0.229 (+)	0.295 (+)	0.056 (+)	0.065 (+)	0.151 (+)	0.557 (-)	
	Int MP x BMI [§]		<i>0.142</i> (-)	<i>0.954</i> (+)	<i>0.929</i> (+)	<i>0.741</i> (+)	<i>0.206</i> (+)	<i>0.989</i> (+)	<i>0.724</i> (-)	<i>0.282</i> (+)	<i>0.111</i> (+)	<i>0.037</i> (-)
PEA	Effect of MP*	Overall	0.015 (+)	0.107 (-)	0.815 (-)	0.351 (+)	0.992 (-)	0.697 (+)	0.255 (+)	0.537 (-)	0.974 (+)	0.034 (-)
		- NW	0.003 (+)	0.554 (-)	0.110 (-)	0.683 (-)	0.057 (-)	0.030 (+)	0.005 (+)	0.118 (-)	0.138 (-)	0.665 (-)
		- OW	0.640 (+)	0.090 (-)	0.398 (+)	0.164 (+)	0.184 (+)	0.460 (-)	0.931 (+)	0.547 (-)	0.708 (+)	0.488 (-)
		- OB	0.251 (+)	0.671 (-)	0.957 (+)	0.699 (+)	0.984 (-)	0.956 (-)	0.825 (+)	0.523 (+)	0.298 (+)	0.035 (-)
	Effect of BMI [§]	Pre-menopausal	<0.001 (+)	0.956 (+)	0.479 (-)	0.992 (-)	0.565 (-)	0.029 (+)	0.011 (+)	0.577 (+)	0.859 (-)	0.023 (+)
	Menopausal	0.074 (+)	0.982 (-)	0.499 (+)	0.479 (+)	0.210 (+)	0.806 (+)	0.232 (+)	0.045 (+)	0.043 (+)	0.519 (-)	
	Int MP x BMI [§]		<i>0.367</i> (-)	<i>0.958</i> (-)	<i>0.332</i> (+)	<i>0.575</i> (+)	<i>0.198</i> (+)	<i>0.260</i> (-)	<i>0.388</i> (-)	<i>0.167</i> (+)	<i>0.075</i> (+)	<i>0.094</i> (-)
OEA	Effect of MP*	Overall	0.027 (+)	0.321 (-)	0.539 (+)	0.462 (+)	0.548 (+)	0.346 (+)	0.111 (+)	0.872 (-)	0.553 (-)	0.208 (-)
		- NW	0.021 (+)	0.263 (-)	0.092 (-)	0.441 (-)	0.173 (-)	0.041 (+)	0.028 (+)	0.028 (-)	0.102 (-)	0.475 (-)
		- OW	0.276 (+)	0.793 (-)	0.109 (+)	0.396 (+)	0.114 (+)	0.808 (-)	0.390 (+)	0.961 (+)	0.858 (-)	0.921 (-)
		- OB	0.462 (+)	0.559 (-)	0.468 (+)	0.316 (+)	0.763 (+)	0.699 (+)	0.578 (+)	0.255 (+)	0.473 (+)	0.216 (-)
	Effect of BMI [§]	Pre-menopausal	0.012 (+)	0.767 (-)	0.484 (-)	0.758 (-)	0.564 (-)	0.310 (+)	0.196 (+)	0.698 (+)	0.544 (-)	0.058 (+)
	Menopausal	0.308 (+)	0.886 (-)	0.147 (+)	0.173 (+)	0.293 (+)	0.933 (-)	0.450 (+)	0.005 (+)	0.110 (+)	0.844 (+)	
	Int MP x BMI [§]		<i>0.428</i> (-)	<i>0.933</i> (+)	<i>0.118</i> (+)	<i>0.208</i> (+)	<i>0.253</i> (+)	<i>0.496</i> (-)	<i>0.749</i> (-)	<i>0.032</i> (+)	<i>0.097</i> (+)	<i>0.441</i> (-)
PEA/AEA	Effect of MP*	Overall	0.554 (+)	0.490 (-)	0.172 (-)	0.082 (-)	0.732 (-)	0.620 (-)	0.580 (-)	0.002 (-)	0.695 (+)	0.855 (+)
		- NW	0.960 (-)	0.775 (+)	0.099 (-)	0.200 (-)	0.456 (+)	0.161 (+)	0.478 (+)	0.034 (-)	0.971 (-)	0.686 (-)
		- OW	0.552 (-)	0.276 (-)	0.302 (-)	0.458 (-)	0.254 (-)	0.442 (-)	0.275 (-)	0.073 (-)	0.239 (+)	0.276 (-)
		- OB	0.118 (+)	0.887 (-)	0.988 (+)	0.275 (-)	0.856 (+)	0.394 (-)	0.776 (-)	0.089 (-)	0.426 (-)	0.219 (+)
	Effect of BMI [§]	Pre-menopausal	<0.001 (-)	0.511 (+)	0.554 (-)	0.087 (+)	0.837 (+)	0.486 (+)	0.365 (-)	0.375 (-)	0.381 (+)	0.021 (-)
	Menopausal	0.015 (-)	0.838 (+)	0.443 (+)	0.157 (+)	0.743 (-)	0.204 (-)	0.122 (-)	0.367 (-)	0.954 (-)	0.875 (+)	
	Int MP x BMI [§]		<i>0.199</i> (+)	<i>0.787</i> (-)	<i>0.333</i> (+)	<i>0.964</i> (+)	<i>0.707</i> (-)	<i>0.152</i> (-)	<i>0.595</i> (-)	<i>0.782</i> (-)	<i>0.591</i> (-)	<i>0.202</i> (+)
OEA/AEA	Effect of MP*	Overall	0.163 (+)	0.840 (-)	0.931 (-)	0.165 (-)	0.946 (+)	0.656 (+)	0.576 (+)	0.017 (-)	0.561 (-)	0.562 (+)
		- NW	0.684 (-)	0.611 (-)	0.061 (-)	0.107 (-)	0.449 (+)	0.087 (+)	0.700 (+)	0.002 (-)	0.340 (-)	0.443 (-)
		- OW	0.657 (+)	0.459 (+)	0.844 (+)	0.261 (-)	0.694 (-)	0.737 (-)	0.935 (+)	0.245 (-)	0.716 (+)	0.660 (-)
		- OB	0.038 (+)	0.457 (-)	0.303 (+)	0.771 (+)	0.961 (-)	0.956 (-)	0.622 (+)	0.595 (-)	0.500 (-)	0.139 (+)
	Effect of BMI [§]	Pre-menopausal	<0.001 (-)	0.428 (+)	0.495 (-)	0.260 (+)	0.466 (+)	0.829 (-)	0.060 (-)	0.110 (-)	0.641 (-)	0.182 (-)
	Menopausal	0.012 (-)	0.848 (+)	0.054 (+)	0.011 (+)	0.974 (-)	0.198 (-)	0.190 (-)	0.646 (+)	0.937 (-)	0.247 (+)	
	Int MP x BMI [§]		<i>0.056</i> (+)	<i>0.711</i> (-)	<i>0.055</i> (+)	<i>0.196</i> (+)	<i>0.583</i> (-)	<i>0.369</i> (-)	<i>0.756</i> (+)	<i>0.208</i> (+)	<i>0.844</i> (+)	<i>0.096</i> (+)
OEA/PEA	Effect of MP*	Overall	0.416 (+)	0.680 (+)	0.137 (+)	0.924 (+)	0.316 (+)	0.208 (+)	0.155 (+)	0.571 (+)	0.268 (-)	0.566 (+)
		- NW	0.887 (-)	0.217 (-)	0.382 (-)	0.350 (-)	0.820 (+)	0.488 (+)	0.993 (+)	0.053 (-)	0.316 (-)	0.389 (-)
		- OW	0.160 (+)	0.049 (+)	0.080 (+)	0.675 (-)	0.289 (+)	0.494 (+)	0.114 (+)	0.381 (+)	0.393 (-)	0.421 (+)
		- OB	0.990 (+)	0.550 (-)	0.182 (+)	0.133 (+)	0.771 (+)	0.407 (+)	0.441 (+)	0.194 (+)	0.991 (-)	0.522 (+)
	Effect of BMI [§]	Pre-menopausal	0.257 (-)	0.620 (-)	0.734 (-)	0.417 (-)	0.934 (+)	0.192 (-)	0.159 (-)	0.697 (-)	0.300 (-)	0.632 (+)
	Menopausal	0.427 (-)	0.803 (-)	0.075 (+)	0.115 (+)	0.862 (+)	0.605 (-)	0.740 (-)	0.022 (+)	0.886 (+)	0.168 (+)	
	Int MP x BMI [§]		<i>0.924</i> (+)	<i>0.894</i> (+)	<i>0.112</i> (+)	<i>0.082</i> (+)	<i>0.952</i> (+)	<i>0.706</i> (+)	<i>0.477</i> (+)	<i>0.033</i> (+)	<i>0.484</i> (+)	<i>0.335</i> (+)

SBP: systolic blood pressure; DBP: diastolic blood pressure; HOMA-IR: homeostatic model assessment – insulin resistance; HDL: high density lipoprotein; AEA: N-arachidonoyl ethanolamide; PEA: N-palmitoyl ethanolamide; OEA: N-oleoyl ethanolamide; NW: normal weight; OW: overweight; OB: obese; Int.: interaction. [‡] Two-way ANOVA (analysis unadjusted for the metabolic parameters). [⊘] Two-way ANCOVA (metabolic parameters introduced as covariates). [§] Effect of BMI on NAE levels and ratios. Positive effect (+): NAE values increased with increasing BMI classes. Negative effect (-): NAE values decreased with increasing BMI classes. * Effect of MP on NAE levels and ratios. Positive effect (+): higher NAE values in menopausal than in premenopausal females; negative effect (-): lower NAE values in menopausal than in premenopausal females. [§] Interaction between BMI and MP effects on NAE levels and ratios. Positive interaction (+): the positive (or negative) effect of BMI on NAE values is higher (or lower) in menopausal than in premenopausal females (i.e.: the positive (or negative) effect of MP on NAE values increased (or decreased) with increasing BMI classes). Negative interaction (-): the positive (or negative) effect of BMI on NAE values is lower (or higher) in menopausal than in premenopausal females (i.e.: the positive (or negative) effect of MP on NAE values decreased (or increased) with increasing BMI classes).