Supplementary results

Table S1. Results of comparisons of means between the early follicular (EF) and the midluteal phase (ML) for Study 1 (left) and Study 2 (right), after applying various possible exclusion criteria (top) and time-windows for cycle phases (bottom). The shaded area depicts results as presented in the main text.

		Study 1				Study 2			
	Exclusion criteria	95% $CI_{diff.}$	N_{EF}	N_{ML}	|d|	95% $CI_{diff.}$	N_{EF}	N_{ML}	|d|
	None	–2.65; 4.60	127	90	0.07	–0.65; 8.82	67	62	0.30†
A	Hormonal contraceptives, pregnancy/breastfeeding, hormonal supplements[a]	3.59; 16.13	34	32	0.77**	–0.40; 10.37	50	56	0.36†
B	Criteria A + mean cycle length: 21-35 days	2.06; 16.50	29	26	0.70*	0.48; 11.47	46	53	0.44*
C	Criteria A + mean cycle length: 24-32 days	0.67; 16.82	25	22	0.64*	0.77; 12.50	43	47	0.48*
	Time windows for cycle phases								
	Andreano et al., 2008; backward-counting	–0.93; 14.86	25	23	0.51†	1.83; 13.16	43	54	0.54*
	Derntl et a., 2013	2.27; 20.02	14	25	0.85*	–0.27; 13.16	28	53	0.45†
	Guapo et al., 2009	3.51; 24.32	18	8	1.17*	3.54; 19.18	29	24	0.81**

**$p < .01$, *$p < .05$, †$p < .10$

[a] Exclusion criteria were assessed marginally differently between Study 1 and Study 2 due to procedural considerations. For example, participants in Study 1 were asked whether they had used the contraceptive pill or any other form of hormonal contraception in the last *six* months, whereas participants in Study 2 were asked whether they had used the contraceptive pill or any other form of hormonal contraception in the last *three* months. Importantly, however, the redefinition of the criteria was performed before data collection to decrease unnecessary data loss. Any redefinition of the criteria after data acquisition was and still is not possible due to the binary response format (yes/no).

Table S2. Results of the linear regression analysis predicting SVO from estimated estradiol and progesterone levels for Study 1 (left) and Study 2 (right), after applying various possible exclusion criteria (top) and alternative cycle position estimation methods (bottom). Results are only reported for estradiol. The shaded area depicts results as presented in the main text.

		Study 1			Study 2		
Exclusion criteria		$ß_{stand.}$	95% $CI_{diff.}$	n	$ß_{stand.}$	95% $CI_{diff.}$	n
	None	−.02	−.12; .08	421[b]	−.11	−.24; .03	273[a]
A	Hormonal contraceptives, pregnancy/breastfeeding, hormonal supplements[a]	−.20*	−.39; −.01	123	−.19*	−.34; −.04	215
B	Criteria A + mean cycle length: 21-35 days	−.25*	−.45; −.05	104	−.21**	−.37; −.05	199
C	Criteria A + mean cycle length: 24-32 days	−.25*	−.48; −.03	90	−.22**	−.38; −.05	182
Alternative cycle position estimation methods[c]							
	Backward-counting[d]	−.23*	−.46; −.02	91	−.05	−.21; .12	182
	Average of forward- and backward-counting	−.29*	−.51; −.07	92	−.15†	−.32; .02	185

**$p < .01$, *$p < .05$, †$p < .10$

[a] see Table S1

[b] Estimated hormone values were not available for cycle days above 28, resulting in a marginally smaller number of participants available for the correlational analysis compared to the final sample as reported in the main text.

[c] See Gildersleeve et al. (2014) for a list of studies using different methods to estimate a woman's position in the cycle and Scott and Pound (2015) for a discussion why the backward-counting method (counting backward from the estimated date of onset for the next menstrual period) is likely to be more error-prone than the forward-counting method (counting forward from the first day of the last menstrual cycle) used in our main analysis.

[d] Hormone levels were provided for 30 cycle days in Stricker et al. (2006). Therefore, women in our studies were "mapped" onto a 30-days cycle with the LH surge assumed to occur on day 16 following the procedures described in Garver-Apgar et al. (2008).

References

Andreano, J. M., Arjomandi, H., & Cahill, L. (2008). Menstrual cycle modulation of the relationship between cortisol and long-term memory. *Psychoneuroendocrinology, 33*(6), 874–882.

Derntl, B., Hack, R. L., Kryspin-Exner, I., & Habel, U. (2013). Association of menstrual cycle phase with the core components of empathy. *Hormones and Behavior*, *63*(1), 97–104.

Garver-Apgar, C. E., Gangestad, S. W., & Thornhill, R. (2008). Hormonal correlates of women's mid-cycle preference for the scent of symmetry. *Evolution and Human Behavior, 29*(4), 223–232.

Gildersleeve, K., Haselton, M. G., & Fales, M. R. (2014). Do women's mate preferences change across the ovulatory cycle? A meta-analytic review. *Psychological Bulletin, 140*(5), 1205–1259.

Guapo, V. G., Graeff, F. G., Zani, Ana Carolina Tagliati, Labate, C. M., dos Reis, Rosana Maria, & Del-Ben, C. M. (2009). Effects of sex hormonal levels and phases of the menstrual cycle in the processing of emotional faces. *Psychoneuroendocrinology, 34*(7), 1087–1094.

Scott, I. M., & Pound, N. (2015). Menstrual cycle phase does not predict political conservatism. PloS one, 10(4), e0112042, doi:10.1371/journal.pone.0112042.

Stricker, R., Eberhart, R., Chevailler, M.-C., Quinn, F. A., Bischof, P., & Stricker, R. (2006). Establishment of detailed reference values for luteinizing hormone, follicle stimulating hormone, estradiol, and progesterone during different phases of the menstrual cycle on the Abbott ARCHITECT® analyzer. *Clinical Chemical Laboratory Medicine, 44*(7), 883–887.