

[Sleep](#). 2007 Oct 1;30(10):1283-91.

Sleep quality and the sleep electroencephalogram in women with severe premenstrual syndrome.

[Baker FC](#), [Kahan TL](#), [Trinder J](#), [Colrain IM](#).

Human Sleep Research Program, SRI International, Menlo Park, CA 94043, USA.
fiona.baker@sri.com

STUDY OBJECTIVES: Women with severe premenstrual syndrome (PMS) or premenstrual dysphoric disorder (PMDD) commonly report sleep disturbances, but the few studies using conventional polysomnographic measures have produced conflicting results. We investigated sleep quality and sleep composition using conventional and quantitative electroencephalographic analyses in women with severe PMS, as compared with that of controls. **DESIGN AND PARTICIPANTS:** Women (aged 18-40 years) were screened to ensure that their PMS symptoms were severe and that they had ovulatory menstrual cycles. Nine women with PMS or PMDD and 12 asymptomatic control subjects then had laboratory-based polysomnographic recordings at 2 phases of the menstrual cycle: follicular phase and late luteal (premenstrual) phase. **RESULTS:** Women with severe PMS reported a significantly poorer subjective sleep quality during the late luteal phase ($P = 0.02$), but there was no evidence of disturbed sleep based on the polysomnogram specific to premenstrual symptom expression: both groups of women had increased wakefulness after sleep onset ($P = 0.02$) and increased sigma power ($P < 0.01$), especially in the 14-to 15-Hz band during non-rapid eye movement sleep, in the late luteal phase compared with the follicular phase. There were, however, some group differences in electroencephalographic measures regardless of menstrual phase, including decreased delta incidence ($P = 0.02$) and increased theta incidence and amplitude ($P < 0.05$) in women with PMS, suggesting the possibility of sleep electroencephalogram trait markers in women with PMS. **CONCLUSION:** Perceived poor quality sleep is a characteristic of severe PMS, but sleep composition based on polysomnographic measures and quantitative electroencephalographic analysis does not differ in association with premenstrual symptom expression in the late luteal phase.

PMID: 17969462 [PubMed - indexed for MEDLINE]

PMCID: PMC2266284