

Publication**Menstrual cycle and respiratory symptoms in a general nordic-baltic population****JournalArticle (Originalarbeit in einer wissenschaftlichen Zeitschrift)****ID** 1777751**Author(s)** Macsali, Ferenc; Svanes, Cecilie; Sothorn, Robert B; Benediktsdottir, Bryndis; Bjørge, Line; Dratva, Julia; Franklin, Karl A; Holm, Mathias; Janson, Christer; Johannessen, Ane; Lindberg, Eva; Omenaas, Ernst R; Schlünssen, Vivi; Zemp, Elizabeth; Real, Francisco Gómez**Author(s) at UniBasel** [Dratva, Julia](#) ; [Zemp Stutz, Elisabeth](#) ;**Year** 2013**Title** Menstrual cycle and respiratory symptoms in a general nordic-baltic population**Journal** American journal of respiratory and critical care medicine : an official journal of the American Thoracic Society**Volume** 187**Number** 4**Pages / Article-Number** 366-73**Keywords** menstrual cycle, RHINE, respiratory symptoms, asthma, sex hormones

RATIONALE: There is little knowledge of variations in respiratory symptoms during the menstrual cycle in a general population, and no investigation of potential modifying factors. **OBJECTIVE:** To investigate menstrual cycle variation in respiratory symptoms in a large general population, using chronobiology methodology, and stratifying by BMI, smoking and asthma status. **METHODS:** 3926 women with regular cycles

≤ 28days and not taking exogenous sex hormones, answered a postal questionnaire regarding the first day of last menstruation and respiratory symptoms last three days. Moving 4-day means were computed to smooth uneven records of daily sampling; best-fitting 28-day composite cosine curves were applied to each time series to describe rhythmicity. **MEASUREMENTS AND MAIN RESULTS:** Significant rhythmic oscillations over the menstrual cycle were found in each symptom for all subjects and subgroups. Wheezing was higher on cycle days 10-22, with a mid-cycle dip near the time of putative ovulation (days 14-16) in most subgroups. Shortness of breath was higher on days 7-21, with a dip just prior to mid-cycle in many subgroups. Cough was higher just following putative ovulation for asthmatics, BMI \rightarrow ≥ 23 kg/m² and smokers, or just prior to ovulation and menses onset for low symptomatic subgroups. **CONCLUSIONS:** Respiratory symptoms varied significantly during the menstrual cycle and were most frequent from the mid-luteal to mid-follicular stages, often with a dip near the time of ovulation. The patterns varied by BMI, smoking and asthma status. These relations link respiratory symptoms with hormonal changes through the menstrual cycle and imply a potential for individualized chronotherapy for respiratory diseases

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