

European Respiratory Society Annual Congress 2012

Abstract Number: 4535

Publication Number: P1880

Abstract Group: 4.2. Sleep and Control of Breathing

Keyword 1: Epidemiology **Keyword 2:** Public health **Keyword 3:** Sleep disorders

Title: Menstrual status in women and sleep-related outcomes

Dr. Francisco 27675 Gomez Real francisco.real@med.uib.no MD , Mr. Ferenc 27676 Macsali ferenc.macsali@med.uib.no MD , Dr. Cecilie 27677 Svanes cecilie.svanes@med.uib.no MD , Dr. Ernst 27678 Omenaas ernst.omenaas@helse-bergen.no MD , Dr. Eva 27679 Lindberg eva.lindberg@medsci.uu.se MD , Dr. Karl 27684 Franklin karl.franklin@lung.umu.se MD , Dr. Bryndis 27692 Benediktsdottir brynben@hi.is MD , Dr. Thorarin 27697 Gisslasson thorarig@landspitali.is MD , Dr. Ane 27706 Johannessen ane.johannessen@helse-bergen.no , Dr. Vivi 27712 Schlunssen vs@mil.au.dk MD , Dr. Christer 27714 Janson christer.janson@medsci.uu.se MD , Mr. Mathias 27715 Holm Mathias.holm@amm.gu.se MD and Dr. Rain 27734 Jogi Rain.Jogi@kliinikum.ee MD . ¹ Gynecology and Obstetrics, Haukeland University Hospital, Bergen, Norway ; ² Gynecology and Obstetrics, Haukeland University Hospital, Bergen, Norway ; ³ Occupational Medicine Haukeland University Hospital, Haukeland University Hospital, Bergen, Norway ; ⁴ Centre for Clinical Research, Haukeland University Hospital, Bergen, Norway ; ⁵ Dept of Medical Sciences, Respiratory Medicine and Allergology, Uppsala University, Uppsala, Sweden ; ⁶ Dept of Surgery and Dept of Medicine, Umeå University, Umeå, Sweden ; ⁷ Dept of Respiratory Medicine and Sleep, University of Iceland, Reykjavik, Iceland ; ⁸ Dept of Respiratory Medicine and Sleep, University of Iceland, Reykjavik, Iceland ; ⁹ Centre for Clinical Research, Haukeland University Hospital, Bergen, Norway ; ¹⁰ Dept of Environmental and Occupational Medicine, Aarhus University, Aarhus, Denmark ; ¹¹ Dept of Medical Sciences: Respiratory Medicine and Allergology, Uppsala University, Uppsala, Sweden ; ¹² Dept of Occupational and Environmental Medicine, Gothenburg University, Gothenburg, Sweden and ¹³ Foundation Tartu University Clinics, Lung Clinic, Tartu, Estonia .

Body: Background: There is limited knowledge about how menstrual status may influence sleep related outcomes. We aimed to investigate whether irregular menstruation and menopause affect sleep related symptoms including insomnia and gastroesophageal reflux, Methods: A population-based sample of 8588 women aged 25-55 years answering the Respiratory Health In Northern Europe (RHINE) postal questionnaire were analyzed. Logistic regression models were adjusted for BMI, age, smoking history and socioeconomic status. Results: Women reporting irregular menstruations had significantly more sleep-related symptoms (reflux after going to bed OR=1.67 [1.30 - 2.15], difficulty falling asleep (DIS) 1.42 [1.11 - 1.80], difficulty maintaining sleep (DMS) 1.44 [1.23 - 1.70], excessive daytime sleepiness (EDS) 1.27 [1.08 - 1.48] and early morning awakening (EMA) 1.45 [1.15 - 1.82]) than women menstruating regularly. Menopausal women had significantly higher risk of sleep-related symptoms (reflux after going to bed OR=1.43 [1.07 - 1.90], DIS 2.04 [1.58 - 2.63], DMS 1.87 [1.57 - 2.23], EDS 1.44 [1.21 - 1.73] and EMA 1.73 [1.38 - 2.17]) than premenopausal women. Conclusions: Sleep quality among women was significantly

related to menstrual status; women with irregular menstruations and menopausal women suffered from more sleep-related symptoms with insomnia and gastroesophageal reflux.