Menopause status is associated with circadian- and sleep-related alterations Gómez-Santos C.

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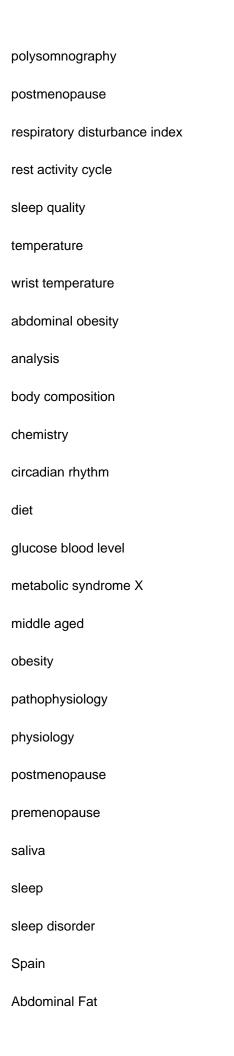
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Objective: The aim of the study was to investigate whether postmenopausal women show differences in circadian-related variables and sleep characteristics compared with premenopausal women, and to analyze potential associations between these circadian-related variables and abdominal fat distribution or metabolic syndrome (MetS) components. Methods: A total of 177 women were studied (127 premenopausal, 50 postmenopausal). Sixty percent of the total population was overweight/obese, with no significant differences between premenopausal (60%) and postmenopausal women (62%) (P = 0.865). Wrist temperature (WT) and rest-activity cycles were measured during 8 consecutive days, and sleep and food diaries collected. MetS characteristics and daily patterns of saliva cortisol were analyzed. Sleep characteristics were assessed with domiciliary polysomnography. Results: Postmenopausal women showed a less robust rhythm in WT with lower amplitude (°C) $(0.8 \pm 0.4 \text{ vs } 0.9 \pm 0.5)$ (P < 0.05) and lower mean temperature values at the midpoint of sleep than premenopausal women. Postmenopausal women were also more morning-type than premenopausal women, showing a phase advance of approximately 1 hour in WT and rest-activity rhythms, and more morning-type habits (earlier sleep onset/offset and breakfast intake) (P < 0.05). Postmenopausal women showed higher levels of activity in the morning and lower in the evening compared with premenopausal women (P < 0.05). Daily variability in cortisol was significantly reduced in postmenopausal women compared with premenopausal women (P < 0.05). Postmenopausal women had increased frequency of sleep-related breathing abnormalities (P < 0.0001). In the women studied, abdominal fat and MetS

were associated with an increase in circadian alterations (high fragmentation and low amplitude of the rhythm) (P < 0.05). Conclusions: Postmenopausal women exhibit loss of circadian robustness and an increase in sleep abnormalities compared with premenopausal women. © 2016 by The North American Menopause Society.

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Circadian
Cortisol
Menopause
Obesity
Polysomnography
Temperature
hydrocortisone
hydrocortisone
abdominal fat
abdominal obesity
adult
Article
circadian rhythm
circadian rhythm sleep disorder
controlled study
disease association
female
human
major clinical study
metabolic syndrome X
oxygen saturation
physical parameters



Adult
Blood Glucose
Body Composition
Circadian Rhythm
Diet
Female
Humans
Hydrocortisone
Metabolic Syndrome
Middle Aged
Obesity
Obesity, Abdominal
Overweight
Postmenopause
Premenopause
Saliva
Sleep
Sleep Wake Disorders
Spain