



## Does Sleepwalking Impair Daytime Vigilance?

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**S**omnambulism (or sleepwalking) is a non-rapid eye movement sleep parasomnia characterized by partial awakenings and behaviors usually initiated from slow wave sleep (SWS). Our clinical experience suggests that sleepwalkers are often complaining of daytime somnolence.

To verify this objectively, 10 consecutive adult sleepwalkers (4 men, 6 women, mean age:  $33.1 \pm 5.9$  years) consulting at the sleep clinic were studied with the research version of the multiple sleep latency test (MSLT).<sup>1</sup> To be included, sleepwalkers had to report a minimum of two episodes on average per month over the past 6 months that were not of a traumatic, neurological, or pharmacological origin. Ten sex and age-matched controls (mean age:  $33.4 \pm 6.7$  years) were also studied in the sleep laboratory. Subjects signed a consent form prior to their participation. The MSLT was administered according to standard procedures, i.e., 5 opportunities to nap administered at 10:00, 12:00, 14:00, 16:00, and 18:00 and preceded by one night of polysomnography. In order to investigate their somnolence throughout the day in their habitual life context (no naps at work), participants were awakened after 1 minute of sleep. The test was stopped after 20 minutes if they did not fall asleep. Participants were not allowed to drink alcohol or beverages containing caffeine, nor were they allowed to sleep between the 5 tests. Mean apnea-hypopnea index was  $2.6 \pm 4.86$  for controls and  $0.7 \pm 0.40$  for sleepwalkers ( $p = 0.87$ ).

Sleepwalkers had a significantly lower mean sleep latency on the MSLT than control subjects ( $8.4 \pm 5.2$  versus  $12.7 \pm 3.3$ ; Mann-Whitney  $p = 0.02$ ). As shown in Figure 1, between-group differences on the MSLT were significantly more marked for the trials administered at 12:00 ( $7.1 \pm 7.1$  versus  $13.7 \pm 5.1$ ; Mann-Whitney  $p = 0.023$ ) and at 16:00 ( $6.3 \pm 5.4$  versus  $12.4 \pm 5.6$ ; Mann-Whitney  $p = 0.023$ ) trials. Moreover, 7 of the 10 sleepwalkers and none of the controls had a mean latency below 8 minutes, considered to be the threshold for clinical somnolence.<sup>2</sup> Only one of the 10 sleepwalkers had a somnambulistic behavior during the night preceding the MSLT. It is interesting to note that he had the shortest MSLT mean latency (4.6 minutes).

This is the first time that daytime somnolence has been assessed in patients with somnambulism. The somnolence in sleepwalkers may be linked to their known numerous awakenings from SWS and decreased delta power.<sup>3</sup> Sleep disordered breathing is not likely the cause of the somnolence considering that sleepwalkers had a very low apnea-hypopnea index. Future studies, should include an adaptation night and investigate the relationship between sleep architecture variables and daytime somnolence. Additional work is also needed to elucidate the clinical and functional significance of the daytime somnolence experienced by sleepwalkers through further testing of vigilance (psychomotor vigilance task, event-related potentials, etc.).

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### DISCLOSURE STATEMENT

The authors have indicated no financial conflicts of interest.