

Sleep Characteristics of 40-45 year old Short, Medium and Long Sleepers in a Norwegian County.

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Introduction: In a recent study from USA it was reported that subjects who slept between 6.5 and 7.5 hours per night had lower mortality rates than both shorter and longer sleepers. We studied sleep characteristics of short (<6.49h), medium (6.50h-7.49h) and long (>7.50 h) sleepers in a material collected on 40-45 year olds in Hordaland county, Norway.

Methods: The study population included all individuals in Hordaland county born 1953-57 (29.400). A subgroup of 8860 persons (3531 men and 5329 women) answered a questionnaire with detailed information on sleep habits and problems. Sleep length was defined as reported rise time minus bedtime minus sleep latency. Subjects reporting shiftwork or being on call were excluded. Thus data from 2337 men and 3183 women were complete enough to be included in this material. Subject scored Morningness-Eveningness on a 5 point scale (clearly morningness =1, clearly eveningness =5), Sleep Satisfaction on a 5 point scale from very good =1 to very poor =5, and Sleepiness and Difficulty sleeping on a 5 point scale from never =1 to always =5.

Results: 569 men (24 %) and 485 women (15 %) were short sleepers, 1221 men (52 %) and 1484 women (47 %) were medium sleepers while 547 men (23 %) and 1214 women (38 %) were long sleepers (gender diff. Chi square $p < 0.0001$).

Mean subjective sleep need reported by male short sleepers was one hour shorter than sleep need reported by long sleepers: 6.74 h (decimals), 95 % confidence interval 6.66-6.82, vs. 7.71 (7.66- 7.78)h, the medium length sleepers reporting intermediate values: 7.29 (7.25-7.33)h. Women in all three categories reported higher subjective sleep need than men in the same category: short sleepers 7.40 (7.30-7.50)h, medium length sleepers 7.65 (7.61-7.69)h, long sleepers 8.03 (7.98-8.07)h.

Sleep latencies were significantly longer in short sleepers than in long sleepers (men 21.6 min vs. 15.6 min; women 30.0 min vs. 15.8 min). In medium length sleepers latencies were 15.8 min (men) and 17.1 min (women).

Both male and female short sleepers scored significantly higher on the morningness-eveningness scale (more eveningness) than long sleepers. Male medium length sleepers did not differ from long sleepers in this respect, while women medium sleepers had an intermediate score.

The scores for sleepiness and difficulty sleeping were significantly higher in short than in long sleepers in both genders and higher in women in all categories. Sleep satisfaction was higher in the medium and long sleepers than in the short sleepers of both genders but did not differ between the medium length and long sleepers.

Conclusions: Short sleepers differ from intermediate and long sleepers on several sleep characteristics. They report lower sleep need, longer sleep latency, more sleepiness and more difficulty sleeping. They are less satisfied with their sleep, and they tend to be evening persons.