

# Speaker's Corner

## **Abstract Text and Author Block**

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**Background:** Sleep is often disrupted in people with dementia. To help assess whether any association between sleep duration and dementia may be the consequence of pre-clinical disease or causal we examined dementia risk in relation to follow-up time after reporting sleep duration in a large UK prospective study of women.

**Method:** About 1.3 million women were recruited in median year 1998 (IQR 1997-1999) in England and Scotland; in 2001 (IQR 2000-2003), ~830,000 reported their usual hours of sleep per 24 hours. They were followed for any mention of dementia in hospital records, the first mention of which was the main outcome. Cox proportional hazards regression was used to estimate dementia detection risk ratios (RRs and 95% confidence intervals [CI]) for <6, 6, 9, and >9 hours of sleep, compared to 7-8 hours, respectively, during follow-up periods of 0-4, 5-9, 10-14 and 15+ years after sleep duration was reported. Adjustment was made for sociodemographic factors, lifestyle factors, and other characteristics.

**Result:** Women most commonly reported sleeping for 7-8 hours (67%), with substantially fewer women reporting short sleep duration (<6 hours [5%], 6 hours [18%]) or long sleep duration (9 hours [7%], >9 hours [3%]). Over a mean 17 years of follow-up (with <2% lost to follow-up) ~34,000 women had at least one hospital record of mentioning dementia. Compared to 7-8 hours, there was no clear and consistent association between short sleep duration (<6, 6 hours) and dementia detection risk throughout the follow-up periods. Long sleep duration (9, >9 hours) was associated with higher dementia detection risk in the first 5 years of follow-up (e.g. RR for >9 vs 7-8 hours sleep: 2.78 [95% CI, 2.22-3.48]), but these RRs declined rapidly as follow-up time increased and had largely disappeared 15+ years of follow-up (1.18 [1.08-1.28]), suggesting that the short-term associations are the consequence of pre-clinical disease. Associations by follow-up period did not notably differ for Alzheimer's disease, vascular dementia, and unspecified dementia.

**Conclusion:** Increased sleep duration appears to be a consequence of pre-clinical dementia but there is little to suggest a long-term causal association of sleep duration with dementia risk in women.

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