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Sleep duration, midday napping, and sleep quality and incident stroke

The Dongfeng-Tongji cohort

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Abstract

Objective To investigate the associations of sleep duration, midday napping, sleep quality, and change in sleep duration with risk of incident stroke and stroke subtypes.

Methods Among 31,750 participants aged 61.7 years on average at baseline from the Dongfeng-Tongji cohort, we used Cox regression models to estimate hazard ratios (HRs) and 95% confidence intervals (CIs) for incident stroke.

Results Compared with sleeping 7 to <8 hours/night, those reporting longer sleep duration (≥9 hours/night) had a greater risk of total stroke (hazard ratio [HR] 1.23; 95% confidence interval [CI] 1.07–1.41), while shorter sleep (<6 hours/night) had no significant effect on stroke risk. The HR (95% CI) of total stroke was 1.25 (1.03–1.53) for midday napping >90

minutes vs 1–30 minutes. The results were similar for ischemic stroke. Compared with good sleep quality, those with poor sleep quality showed a 29%, 28%, and 56% higher risk of total, ischemic, and hemorrhagic stroke, respectively. Moreover, we observed significant joint effects of sleeping ≥9 hours/night and midday napping >90 minutes (HR 1.85; 95% CI 1.28–2.66), and sleeping ≥9 hours/night and poor sleep quality (HR 1.82; 95% CI 1.33–2.48) on risk of total stroke. Furthermore, compared with persistently sleeping 7–9 hours/night, those who persistently slept ≥9 hours/night or switched from 7 to 9 hours to ≥9 hours/night had a higher risk of total stroke.

Conclusions Long sleep duration, long midday napping, and poor sleep quality were independently and jointly associated with higher risks of incident stroke. Persistently long sleep duration or switch from average to long sleep duration increased the risk of stroke.

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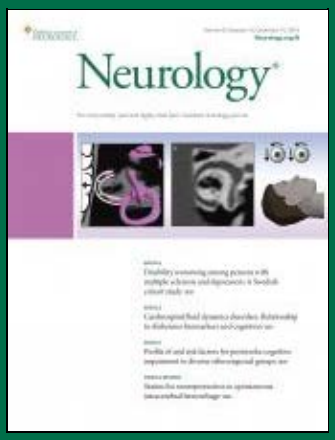

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